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THE

# MEDICAL EXAMINER,

AND

# RECORD OF MEDICAL SCIENCE.

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THE

# MEDICAL EXAMINER,

AND

# RECORD OF MEDICAL SCIENCE.

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## ORIGINAL COMMUNICATIONS.

*Annual Report of the Committee on Public Hygiene, read before the Northern Medical Association of Philadelphia, Nov. 20th,* 1851, *by the Chairman,* WILSON JEWELL, M. D., *and ordered to be published.*

Life-knowledge, or that department of Medical Science which aims to prolong life to its natural limit, is the important and interesting field of inquiry, which has been assigned your Committee on Public Hygiene.

No subject possesses more intrinsic merit, than that which claims to develop the surest sources of health and life, and to secure "attainable longevity and exalted happiness." The sanitary question may justly be regarded, says Dr. Guy, of King's College, London, as "*the* great question of the day." Indeed, if we look at it as a question of humanity; or regard it as a great act of justice; or measure it by the rule of economy; or view it in its moral relations, we do not hesitate to say, that it has no rival.

Until of late years, public hygiene has elicited but little attention either in the halls of legislation or of science. In our own country it has been treated with great indifference, whether we view it in its physical, economical, or moral relations. Sanitary facts, for the most part, lie unrecorded. Statistical records, to show the waste of human life in cities over rural districts, have not been gathered. American authors, with but few exceptions, have been silent on the subject. American legislators have enacted laws upon every thing else than human health and life. With our profession it might be said truthfully, it has been an "unexplored region of medical inquiry;" while beyond its pale, there are only to be found a few solitary advocates for its claims upon the attention of men of science, or for its recognition by the public authorities, in order to meet the requirements of civilized life.

A brighter day, we trust, is dawning, as regards the importance of a watchful attention to the principles of public hygiene. Massachusetts has led the way, by making it a subject of scientific research, and by providing for a sanitary survey of the State. In our own city, the College of Physicians have been earnestly engaged in the prosecution of the science of Hygiene. One of the first acts of the American Medical Association, was the appointment of a Committee to report on Hygiene—thus opening a new and interesting door of scientific research for the profession, and laying a broad and deep foundation for its further and more enlarged prosecution.

Vital statistics and hygiene are twin brothers; they lie at the very threshold of the medical profession. Without a knowledge of these two important departments of medical science, no man can practice his profession well. Vital statistics give us an accurate account of births, marriages and deaths in certain districts and periods of time; the character of disease incident to certain professions or trades; a description of localities where disease has been most prevalent; the condition and vicissitudes of the seasons; the thermometrical, barometrical and hygrometrical changes that occur during the year; the prevalence of the winds, as also the geological formation of certain districts. Hygiene, on the other hand, is the hand-maid to medicine, and when properly understood and appreciated, is the means of saving thou-

sands from an untimely grave. Hygiene is health; perfect health that condition of things which gives to its possessor strength, energy, power, buoyancy of spirits, and comprehends the perfect and harmonious performance of all the functions of the body.

How important, therefore, is the proper study and application of the sanitary science, or, in other words, of public health; what subject can transcend it? "We look upon things as valuable, that are worthless without life, and that cannot be enjoyed without health. How much more valuable, then, the means to possess and enjoy both life and health, which alone can give value to other objects!"

As medical men, members of a benevolent and God-like profession, the custodians of life and health, watchmen at the portals through which disease with its feverish and multiplied train of consequences enters, causing impaired health, physical debility, and oftentimes death among our citizens—it belongs to us to inquire into this great subject of public health—to discuss it, survey it, analyze it, and finally to preserve it, by the removal of numerous existing evils, the product of a neglect of the laws of hygiene. Furthermore, to suggest such measures as ought to be adopted for the improvement of public health, or, in one word, to remove the preventable causes of disease.

We are not of that number who look upon the medical profession as exclusively a curative one, and designed alone to alleviate the physical evils to which humanity is subject; having nothing to do with those great elementary principles, that determine the fullness of unalloyed health and length of days. On the other hand, we have always viewed our profession as conservative; that it belongs to us, as much to prevent disease, and to employ the means which our position and knowledge have placed within our reach, for the promotion and preservation of health, as to remove debility, to cure sickness or to heal injuries. How much better, how much more philosophical and philanthropic, to endeavor to arrest the march of disease, by a timely removal of its causes, appreciable only to the intelligent physician, than to wait, until they have penetrated and poisoned the fountains of life, and then attempt to repair the evil. We believe it is as much a part of our profession to teach the people how to

avoid disease and how to live without being sick, as to cure them, when their systems have become undermined from any of the distressing maladies which "flesh is heir to."

In pursuing the subject of our report, we shall direct your attention more particularly to special Hygiene, and confine our remarks to some of the more prominent causes affecting individual and public health in our own city.

Philadelphia enjoys a high reputation, both at home and abroad, for its salubrity. What with its rectangular streets, its convenience for drainage, its natural advantages of surface and soil, the many excellent municipal regulations for cleanliness and the supply of pure and wholesome water, it is equal, perhaps, for health, to almost any city in the world. Had the design of its great founder been carried out in all its extent of detail, and had not the cupidity of property owners, whose only aim has been, to realize the greatest gain from their estates, been suffered to go on untramelled and unchecked by wholesome laws, we should at this day, have been in the enjoyment of a far greater immunity from disease. We are not wanting, however, in certain localities, where there exist fruitful causes for the deterioration of a pure and salubrious atmosphere, and the undermining of public health, which call loudly for removal; for, with the rapid increase of our own population and the continued influx of strangers from immigration, these causes are multiplying and extending, and in the same ratio with their increase, do we find a corresponding augmentation of disease and annual mortality.

The compass of a single report, however, will not allow of a careful examination into all the existing causes of insalubrity in and around our city. A few only of the more prominent must suffice.

Shattuck, in his admirable sanitary report to the Massachusetts legislature, recommends, that the causes of disease, should be divided into three general classes, viz: Atmospheric, Local, and Personal. The first, embraces all those agencies to which every person is alike exposed. The second, those to which persons living in a particular neighborhood or dwelling house are subject. The third, includes those which originate with the individual alone, independent of atmospheric or local causes.

Under the first head, or atmospheric, may be named climate, seasons, temperature of the atmosphere, its moisture, dryness, weight and composition, malaria, and those hidden conditions of the air, which have sometimes been called epidemic causes of disease.

Under the second head, or local causes, we may enumerate bad water, defective sewerage, drainage and surface cleaning, animal and vegetable effluvium, bad air, imperfect supply of light and heat, filthy or damp habitations, &c.

Under the third, or personal causes, are included hereditary constitution and imperfect organization, defective food, improper clothing, occupation, habits of life, exposure, excessive physical or mental exertion, &c.

Adopting the above division, we shall pass by the atmospherical and personal, and consider some of the principal local causes, for the insalubrity of our city, embracing bad or impure air, defective surface and sewer drainage, the construction of privies, and an inadequate supply of pure and wholesome water, especially for the laboring classes.

Impure air in our city, which may be considered as the result, to a great extent, of defective ventilation, both in many of our thoroughfares, narrow streets and alleys, in public and private houses, factories, schools, churches and prisons, is a most active cause of disease, and one of the principal, if not the chief agent, for the great amount of infant mortality which is so common in this and other large and crowded cities.

It is a well established physiological principle, that pure air is necessary for the maintenance of respiration, the changes in the blood, and the vitalization of all the tissues. Deprived of this *pabulum vitæ*, this great restorer and preserver of the exhausted animal frame, man sickens and dies. Deteriorate the air we breathe, and you lessen materially the chances of a long life; hence is to be ascribed the greater mortality in cities over rural districts. In cities, the inhabitants inhale an atmosphere vitiated with impure and poisonous gases, and containing a less per centage of oxygen than the air of the country. An atmosphere thus impregnated, cannot be breathed with impunity, because man requires for the process of vitalization 24 cubic inches of oxygen every minute. Deprived of this supply, his health is impaired.

his nervous energy flags, his functions, both animal and mental fail to perform their accustomed offices with the vigorous tone of health, and his days are consequently shortened. It is remarked by statisticians that the difference of mortality between a city and a country life, is equal to forty per cent. in favor of the latter.

A pure atmosphere consists of one fifth of oxygen and four fifths of nitrogen, but when impure, we have it mixed with carbonic acid, carbonic oxide, sulphuretted hydrogen, ammoniacal and other deleterious gases. It is well known that man cannot breathe the same air twice with impunity, for the reason, that, during the process of respiration, it is deprived of a certain portion of its oxygen, and its place supplied by the carbonic acid given out from the lungs. Carbonic oxide, which is the product of imperfect combustion, and is often an ingredient in the atmosphere of cities and that of close apartments, is equally injurious in its action on the animal economy with carbonic acid gas. It contains a less proportion of oxygen, and cannot be inhaled even in a minute quantity without injury to health. Should the air we breathe contain only a 300th part of sulphuretted hydrogen and ammoniacal gases, which are frequent emanations from certain factories, slaughter houses, and wherever animal and vegetable matter is in a state of decomposition, we would soon become asphyxiated and die, or suffer in our health, in proportion as these or other noxious or poisonous gases are distributed in a less amount in the atmosphere.

It will not be denied that, in our own city, the atmosphere by which we are surrounded and which we are constantly inhaling, is impregnated, to a greater or lesser extent, according to circumstances, with exhalations from the lungs and bodies of men and animals, from decayed animal and vegetable matters, and from other noxious substances and gases. That the more imperfect the ventilation, the more defective the supply of oxygen, and, consequently, the more poisonous the air. It is on oxygen we rely for life and vigor, hence the importance of a free circulation of pure air in our streets and houses.

Wherever there is an over-crowded or excessive population in narrow or confined streets, or pent up courts and alleys, with small, contracted, and badly ventilated houses, with damp and

foul cellars, and but a very imperfect supply of pure and wholesome water, there we find a deficiency of oxygen and a larger amount of noxious gases in the atmosphere. Is it any surprise that when epidemics prevail, they should be found in just such locations and in their most malignant forms? Should it be any cause of wonder, that cholera infantum selects its victims from the infant population of so foul a nursery for disease during the summer months? Nor can it be denied, that among the class of people who reside in our crowded and unventilated districts, or among those who are confined day after day in close work shops or factories, and who continually breathe an atmosphere deprived of its healthful amount of oxygen, we find scrofula and consumption in all their variety of forms to be prevalent diseases.

It is not, however, in the crowded dwellings of the poor alone, and in pent up courts, alleys and narrow streets, that we find defective ventilation. In the abodes of many whose circumstances and stations in society place them far above the wants of the common necessaries of life, there is a manifest lack of attention to, and appreciation of, healthful ventilation. No city, no street, no dwelling, no apartment whatever, can be really healthy unless a due regard is paid to ventilation; for it is an an essential condition to the comfort and well being of their inhabitants that they shall breathe a pure and wholesome atmosphere.

It is estimated, that one-third of the life of civilized man, is passed in apartments where there is a confined and deteriorated atmosphere, where, for the most part, open windows are precluded, and fires rendered either inconvenient or unnecessary as a source of warmth. Nor is it generally understood, how much suffering arises from the repeated inhalation of a vitiated air in such apartments. In public and private assembly rooms, in churches, courts of justice, offices, lecture and school rooms, work shops and factories, bed chambers, sick rooms, hospitals, theatres, &c., how much spent air must be taken into the lungs; "people who would revolt at the idea of drinking out of the same cup or glass with a stranger, or even with a guest, suffer no annoyance from, and feel no disgust at, inhaling what has

already passed through the lungs of those who may be shut up in a room with them."

It is a source of regret that so little attention has been given to this vital subject, and it is high time that a proper system of ventilation in the construction of buildings, both public and private, should be made an object of primary consideration with those whose business is to draught architectural designs. It is evident that heretofore the builder or designer, as a general rule, has placed a far higher value upon the protection from without, and the beauty of arrangement within, in the construction of his edifice, than he has upon a free supply of pure air. It should, however, never be lost sight of, that ventilation, or an arrangement for a supply of air, both as regards quantity and quality, and the removal of that which has been vitiated, should be held as an essential requisite to every building, and form a leading feature in every design.

Whilst there has been considerable attention paid by our municipal authorities to street cleaning, drainage, sewerage, the cleaning of privies, the removal of local nuisances, and the enforcement of the same by suitable ordinances, some of the principal causes for the increased amount of annual mortality in our city, have been, in the opinion of your committee, entirely overlooked, viz: the proper construction of buildings; the building up of confined courts and alleys, without the necessary conveniencies for ventilation, light, privies and yard room; and their occupancy with a crowded population. It is really startling when we reflect upon the ignorance and indifference that is evinced in this particular respect by all classes in the community. Restrained neither by law nor ordinance, men build as they like, for convenience, for profit. They study and contrive how much they can realize out of their lots, by crowding them with houses that scarcely deserve the name, regardless alike of the misery and disease they entail on the unfortunate tenants. In too many instances, also, the tenants are heedless as to health and comfort in the selection of their residences, so they procure a cheap rent—but which, alas, may cost the loss of health, and perhaps of life, as the result of living in and breathing a vitiated atmosphere.

It is a clearly ascertained fact, that the inhabitants of densely

populated and unventilated neighborhoods deteriorate in vitality. Dr. Simon, of London, has observed that: "Many, very many courts and alleys (in London,) hemmed in on all sides by high houses, having no possibility of any current of air; and worst of all, sometimes so constructed, back to back, as to forbid the advantage of double windows or back doors, and thus to render the house as perfectly a cul-de-sac out of the court, as the court is a cul-de-sac out of the next thoroughfare. It is surely superfluous to observe, that these localities are utterly incompatible with health. Among the dense population, it is rare to see any other appearance than that of squalid sickness and misery; and the children who are reproduced with the fertility of a rabbit warren, perish in early infancy. In the worst localities, probably not more than half the children born survive their fifth year."

The picture drawn by Dr. Simon of the condition of the population of London in the crowded and unventilated courts and alleys of that great metropolis, is by no means an unfair representation of what may be found in the crowded districts of our own city. It is well known that cholera infantum, dysentery, and many other diseases, select those neighborhoods where may be found a pent up and spent atmosphere. From the records of our Board of Health, it appears that there were 505 deaths from cholera infantum in 1850—319 of which were under one year, and the remainder within five years. Although we have no special records exhibiting the precise location of these fatal cases, still we are warranted in the conclusion that the majority of them occurred within the crowded districts. Dr. Isaac Parrish, in a valuable report he made in 1849, to the American Medical Association, says: "The amount of infant mortality in Philadelphia, believed to be traceable to a combination of heat, moisture and impure air in confined situations, is sufficient to excite anxious inquiry. The cause of a large portion of the cases of cholera infantum and other bowel diseases which annually carry off such a large number of children during the heat of summer, is as obvious as though it were tangible, and the cure often depends simply upon the removal of the patient from the crowded court or alley to the pure air of the country."

During the prevalence of epidemics, the inhabitants of the

unventilated and crowded portions of a city suffer to a much greater extent than those in more airy and less crowded places. Nor can it be questioned, that these situations are *foci* for harboring and generating zymotic diseases. Evidence of this assertion may be found in the report of our Board of Health, during the prevalence of the cholera in 1849, in our own city, in which they say: "The increased ratio of cases to population in Southwark, must be attributed to its want of cleanliness, its locality, to the character of a portion of its inhabitants that reside in the more densely populated neighborhoods, and to its numerous confined and illy ventilated courts and alleys. That of Moyamensing, to the depraved condition of hundreds of its inhabitants, to the filthy and crowded state of many of its small houses or inhabited cellars, and their vitiated atmosphere."

In a report to the City Councils in 1849, we find some reference made to no less than ninety-one locations such as we have alluded to above, where ventilation and light are deficient, the buildings contracted, over crowded, and many of their inhabitants filthy and depraved. These ninety and one 'plague spots' are confined to the city proper; while in the Districts, especially in Moyamensing, Southwark, Northern Liberties and Kensington, we have a still larger number of badly ventilated courts, alleys and houses, with a crowded and degraded population. We could produce the most indubitable testimony that these localities are injurious to public health and productive of diseases of the lowest type. Dr. Parrish, in the same report we have already referred to, when alluding to precisely such neighborhoods, says, "We hazard nothing in saying that the seeds of scrofula and consumption are sown here; and the more acute diseases, which are distinctly traceable to a deficiency in the supply of the natural elements for sustaining and developing the frame, must prevail in these confined situations." Dr. Isaac Hays, in a letter to the Sanitary Committee of Councils in 1849, in reference to the health and cleanliness of the city, directs their attention to three points, as vastly important; one of which is the opening of all blind alleys and courts, and another, a law to prevent land holders occupying every inch of their ground with buildings, and placing privies in the cellars. The late Dr. Rush, in decribing the means of preventing summer and autumnal

diseases, among other things, says, "In the construction of cities, narrow streets and alleys should be carefully avoided."

In 1666, when the inhabitants of London were venting their execrations upon a harmless bale of silks imported from Holland, as the vehicle of the seeds of the plague with which they had been afflicted annually for half a century, God mercifully relieved them from this dilemma, by permitting a fire to destroy whole streets and lanes of small wooden buildings, which had been the reservoirs of filth for centuries, and thereby the sources of all the plagues of that city. It is recorded that when a proposition was made to replace the burnt district by similar buildings, Sir Christopher Wren, who certainly entertained correct ideas of the advantages of ventilation to health in cities, opposed it, and said, "by so doing you will show that you have not deserved the late fire." They have not had the plague in London since that great conflagration.

A complete system of sewerage and drainage is of the first importance to the salubrity of a city and the comfort of its inhabitants. The relative health of those cities which enjoy the benefits of well constructed sewers and gutters, over those where none exist, is too palpable to require any comment.

The benefits of sewerage on the health of cities, is strikingly illustrated by Dr. T. Southwood Smith, before a Committee of the House of Commons, in which he says, "in every district in which the fever returns frequently and prevails extensively, there is uniformly bad sewerage."

The present system of draining by sewers in our city, while it is not in all respects what could be desired, has unquestionably proved itself useful in preserving health. It would seem, however, by a report from the City Surveyor in 1850, to the Committee on Highways, that an almost entire revision of the plan now in operation is required, before we shall attain that point of practical perfection in sewerage and drainage, by which the accumulating evils of the present imperfect system shall be avoided.

We have in operation at this time near thirty miles of under ground drainage through culverts, varying from three to ten feet in diameter in the clear. These sewers empty themselves into the Delaware and Schuylkill at various points.

The present method of ventilating and cleansing the sewers

is exceedingly defective, and liable at times to render the atmosphere in the immediate vicinity of their inlets or their outlets into the docks, very unwholesome for breathing. The inlets from the streets where there are no traps, as in some of the districts, continually emit an offensive and sickening effluvium which is greatly increased in damp weather; while those arranged with traps, owing to the constant accumulation of offal in their mouths, make it necessary, every few weeks, to remove this deposit of mud and filth, which is oftentimes allowed to remain for several hours in the street, exposed to the sun's rays in the hottest days of summer, saturating the atmosphere around, with poisonous gases, highly injurious to health. A number of the city sewers are ventilated by means of iron pipes, planted on the pavement near the curb, elevated about four feet above the side walk, and pierced near and around their upper extremities with numerous small holes. This plan possesses no advantage, because, the foul air, escaping from the apertures, being somewhat heavier than the surrounding atmosphere, has difficulty in finding its way into the upper regions, and its accumulation becomes a source of much annoyance. Another plan lately proposed to carry off the foul air of the sewers, is, by the construction of lofty shafts or flues, elevated above the tops and built along side the walls of the houses. This method is favorably spoken of in England. We learn that one has already been erected in our city by way of trial, and promises to answer not only as a ventilator, but as a conductor for the noxious gases to a distance above the tops of the houses where they would be innocuous.

Another defect in our system of sewerage arises from the want of a uniform and extended plan in the regulation, not only of the grades but of the diameters of the culverts that have been laid down. In former years it would seem, that little attention had been bestowed upon progressive sewerage; the several culverts then constructed, were laid without a careful reference to the extent of surface required to be drained, to the natural features of the city plat, to the prospective increase of the city limits, or to heavy inundations from rains or sudden thaws, &c., the consequence of which is, that many of the old culverts being imperfect and unfitted, both as regards capacity and ventilation, in order to meet the increasing wants of those sections of

the city in which they are located, contribute but a small share towards the comfort and health of the citizens.

Your Committee are gratified to learn that our intelligent City Surveyor has been for some time engaged in a searching survey of this whole subject, preparatory to the introduction of a complete system for the thorough drainage of the city. The speedy consummation of an object so important is really necessary, and it is to be hoped, that the wisdom and liberality of our Municipal authorities will not only favor this contemplated improvement, but will afford the Surveyor, every facility to carry out in detail, so noble, so philanthropic an enterprise, that will, when completed, contribute in a very large degree to improve the health of the community by a removal of one of the prolific causes of disease.

Surface drainage is adopted to a very great extent in our city, and where the gutters are kept in repair, with a sufficient descent from their summits to the inlets of the sewers, a proper supply of water to carry off their more solid contents, and the occasional use of the broom, they may not become a nuisance. But it cannot be denied, that in many of our streets, alleys and courts, either through negligence or from irregularity in the grading or an indifferent supply of water, there does exist oftentimes if not at all times, a collection of mud and offal that gives out a horrid stench, tending to deteriorate the atmosphere and produce sickness. During the hot months, this state of things is much increased, owing to the rapid decomposition continually going on wherever there are deposits of putrid animal and vegetable matter.

In some of these narrow and confined streets and alleys where resides a crowded and filthy population, the exhalations from the gutters are extremely nauseous and injurious to health.

Another evil from surface drainage is to be found in the mode of paving the streets with large rounded pebble stones; the interstices between each stone affording a nidus for mud and offal, which, decomposing under the rays of the sun during summer, become an aggravated cause for the encouragement of diseases. In addition to what we have advanced about surface drainage and its objectionable features, there is another grievous evil, arising from the mode pursued in street cleaning, which calls for

reform. It is the practice of allowing street dirt, after b eing gathered into heaps, to remain for hours in the streets, and often in the hottest periods of the day. This refuse emits a poisonous exhalation, which is only increased whenever disturbed by the tramp of the horse or the carriage wheels, to the annoyance of those who pass that way.

That the emanations from sewers, gutters, streets, lanes and alleys, when badly paved and graded, or when not paved at all, are productive causes for disease in cities, no one in this enlightened age should, for a moment, deny. The evidence appended to the first report of the Sanitary Commission, appointed by Queen Victoria in 1844, in England, contains abundant proof of the correctness of this position. In their investigations of fifty towns, where the rate of mortality was the highest, and in these were included the largest manufacturing cities and the principal ports, after London—they say, that scarcely in one town in the fifty, was the drainage and sewerage complete; in seven it was indifferent, and in forty-two decidedly bad. The medical witnesses before these commissioners were unanimous in opinion, and brought facts to corroborate their assertions, "that no population is healthy which lives amid cess pools or upon a soil permeated by decomposing animal and vegetable refuse, giving off impurities to the air in their houses and streets." The commissioners also contrast the effects of the health of the inhabitants of sewered and unsewered towns. The duration of life is six years more in the sewered than in the unsewered streets of Ashton-under-Lyne. In Charlton, while the mortality in undrained streets amounts to four per cent. that in the drained districts is only two per cent. Dr. T. Southwood Smith, says, in the same report, that without attention to sewerage, all other precautions to preserve the health of towns must be in vain. Rotherhithe, a part of London, situate on the Thames, has been a favorite haunt of cholera. Its sewerage is deplorably defective, being by open sewers communicating with the Thames.

In the report of the cholera in 1849, in this city, by the Board of Health, it is observed that in Richmond district, the increased amount of disease when compared with other places, was believed to be owing "to its locality along the river front, its want of proper drainage and sewerage, &c." "In Kensing-

ton, to the unpaved, ungraded and undrained condition of many of its streets."

Dr. Isaac Hays, in his letter to Councils, in 1849, says, that "the entire abandonment of surface drainage" is important to the health of the city.

In the opinion of your Committee, surface drainage should not be allowed, wherever it is possible to dispense with it, by substituting underground drainage by means of a well constructed drain through iron pipes, leading from dwelling houses, with properly adjusted traps, and communicating with the sewers, which are to be found in our principal streets. Boston has very little surface drainage from houses, their gutters being dry, except after heavy rains. They send forth no offensive exhalation, and are perfectly innocuous.

We would also suggest the importance of having the street cleaning done before 9 A. M., or after 5 P. M., particularly during warm weather, and that all the year round, carts should follow in the wake of the scavengers, to remove the dirt and offal as rapidly as it is collected into heaps. These or similar sanitary arrangements, would no doubt add materially to the health of our city.

We have already intimated that Philadelphia is supplied with pure and wholesome water, and we may add, in greater abundance than that of other cities, obtaining their water in a similar manner, unless it may be Glasgow, where the supply is equal to 37 gallons per day to each citizen, and in New York, where the supply of water is said to be enormous. Our supply is about 30 gallons, per head, according to the report in 1849, of Frederick Graff, Esq., Superintendent of Fairmount Water Works. Although this may be considered an adequate supply for all personal purposes of life, yet your committee are of the opinion that it is not sufficient for more general and public purposes. Nor can it be repeated too often, that without an abundance of water, neither house nor street drainage can be perfect. With a scanty supply, kitchen offal and other refuse will accumulate, decomposition will take place in a few hours, in hot days especially, thus poisoning the atmosphere and becoming active causes for the formation and spread of disease.

Towards the poor of our city also, there is a short-sighted

policy adopted by our public authorities as well as by landlords. They do not confer upon them those privileges and benefits arising out of the free supply of water for their domestic and personal use, which are enjoyed by their more fortunate neighbors. Few if any baths are to be found in the dwellings of the poor, and hydrant water for the necessary domestic purposes of the family is, in the generality of court houses, an article in great demand, owing to its limited supply.

On the subject of an ample supply of water, your committee would sugggest, that it only remains for the authorities, in order to render it among the most efficient means of public health in our city, to direct the daily opening of all the hydrant plugs, morning and evening, for half an hour during the summer months, and once a day through the spring and fall months, for the effectual cleaning of the gutters. In behalf of the poor, that public baths should be established for their use, and an ordinance be passed, requiring landlords and owners of property to introduce the Schuylkill water into every house, however small, for the use of the tenants. The benefit arising out of a liberal system, such as we have suggested, would soon be made apparent in the removal of much general and personal filth, prominent causes of disease; and be contributing to the moral as well as the physical improvement of the laboring classes in the community.

Another grave evil which mars the sanitary condition of our city, is to be found in the number and construction of privies. These may be considered as necessary evils, but they undoubtedly contribute in a large degree towards the production of disease.

It is estimated that our population of 409,000, would produce annually about 17,000 tons of night soil, and 130,000 tons of urine. Hundreds of privies in our city and districts, especially those attached to the houses in courts, and tenements in the smaller streets and alleys, are at all times full, or in a very offensive condition, notwithstanding the rigid supervision adopted by the Board of Health in order to prevent their becoming nuisances. Many of the privies are in near proximity to the dwellings or in the cellars, either for want of yard room or convenience, and emit the most fœtid exhalations, saturating, in some instances, the atmosphere of the whole house. In some courts,

the inmates of the row, comprising a number of families, have only one or two privies in common.

No attention, in general, has been paid to the ventilation of privies. From this condition of things, can it be otherwise, than that the privies throughout our city are fertile sources of an impure atmosphere? Dwell one moment upon the fact, that 17,000 tons of human ordure, deposited in one year, is undergoing the process of fermentation and decomposition, exhaling their nauseous and poisonous gases into the atmosphere we breathe, contaminating it at our doors, and even in many of our dwellings, and the inference must be, that this evil is a prolific source for disease.

To determine upon a plan to dispose of this necessary refuse from a crowded population without its becoming a nuisance, would require more time and space than has been allotted to your committee in this report. The propriety of a change in the present system cannot be too strongly insisted upon, as it is an every day increasing and disgusting evil, in a sanitary point of view.

The present City Surveyor, has, in a report to Councils, already alluded to, suggested the plan, as far as practicable, of having the water closets to empty themselves into the common sewers, under certain regulations, which arrangement he thinks "would lead largely in future building to the introduction of water closets, in lieu of the old system of well privies, a system, nauseous in all its features, and more or less tending to inconvenience and disease."

Within a few days the Board of Health have given public notice, that all privy wells cleaned from and after December 1st, must be previously disinfected or deodorized. This we will allow is one step towards a change in the old method, and is an excellent sanitary measure, removing at once an intolerable nuisance during the process of emptying the wells; but it does not reach the evil to which we have alluded.

Before concluding this report, there is another subject, of some interest, to which your committee would briefly refer, to wit: has the ratio of mortality decreased in our city, as a consequence of the sanitary improvements made by the corporations from year to year? While we believe that much of the present salubrity of Philadelphia depends upon the wholesome sanitary measures

adopted by the municipal authorities, it is nevertheless true, that no material change has been effected as regards the ratio of deaths to population. By a reference to Dr. Emerson's tables as published in the Amer. Jour. of Medical Sciences for several decennial periods, it will be found that the proportion of deaths to population has been as follows:

| | | | | |
|---|---|---|---|---|
| From 1807 to 1820, a period of 13 years, there were deaths to population as | | | | 1 in 47.86 |
| " | 1820 to 1830, a period of 10 years, | | | 1 in 38.85 |
| " | 1830 to 1840, | " | " | 1 in 41.15 |
| " | 1840 to 1848, | " | 8* " | 1 in 39. |

Figures are facts, and by these tables it will at a glance be seen, that the ratio of deaths to population has rather increased than otherwise. In conclusion, your Committee would say, that while the sanitary measures which have been adopted, consisting mainly of grading, paving, sewerage, cleansing the streets and privies, the removal of local nuisances and the present supply of pure and wholesome water, are advantageous to the health of the city, they are not adequate to the prevention of disease. Some of the most prominent causes have been overlooked; such as the practice of erecting small unventilated tenements in contracted streets, alleys, and blind courts, and overcrowding them with a filthy population; offensive and unwholesome factories, burial grounds, slaughter houses, hog pens, &c. While these things are allowed to remain in the heart of the populated districts undisturbed, and while in the absence of a better devised plan for the disposal of human ordure, the want of a more liberal supply of pure water for the streets and drains, but more especially for the houses of the laboring classes, together with public baths for the accommodation of the poor—our annual list of preventable diseases must not only continue to be large, but will increase; neither will the annual mortuary tables exhibit any favorable change in the ratio of deaths to population.

*This last octennial calculation is taken from a report of a Committee of the College of Physicians.

*Thoughts on the Study of Diseases with reference to Geology. Communicated to the Medical Society of Berks County, Nov. 4th,* 1851, *by* J. B. HIESTER, M. D.

It is assumed as an established fact in Geology that soil is a detritus, the result of disintegration of the solid strata that compose the crust of the earth. With scarcely an appreciable exception, (beyond the drift region) the soil thus formed rests immediately upon the rocks from which it has been produced. That soil owes its variety to the varied constituent parts of which the underlying rocks are composed, was very reasonably inferred from its position and physical character. Chemical analysis, on a very extended scale, has fully sustained the truth of this influence. It is also proved by analysis, that all foreign matters or impurities, found in water, have their source in the soluble materials contained in the geological formations through which it percolates. An examination of the soil or water of any district readily determines its geological constitution; so also does a knowledge of its geology lead to certain conclusions as to the character of its soil and water. Any power, therefore, attributable to the action of soil and water, has its source in geological formation.

The well-marked influence exerted by soil and water upon the vegetable kingdom, is so obvious, that it must have obtruded itself upon the observation of man, from the earliest period of his history. That the limits of plants are distinctly and sharply marked by this influence is well known to every botanist. This limitation is not restricted to herbaceous plants only, but is clearly visible also in the distribution of the forest-trees, many of which are almost exclusively confined to certain soils. In the aquatic plants too, the same limitation is clearly marked. In some streams we find certain species of plants, which are scarcely ever met with in other streams, in their immediate vicinity. All the physical conditions of such streams are often precisely similar, differing only in the chemical character of their waters.

From time immemorial has the agriculturist been guided in his occupation by a knowledge of the fact, that certain kinds of natural productions require a peculiar soil for their successful

cultivation. An attempt to cultivate particular species of the cerealia, for example, in some soils, is certain to result in failure, whilst other species produce abundantly when sown upon the same soil. These facts were so well known from observation, that they were unhesitatingly and advantageously acted upon. But the science of chemistry has not only confirmed their truth, but clearly revealed the laws upon which they depend.

Many of the cerealia, as well as many roots and vegetables cultivated for food, indispensibly require certain inorganic chemical constituents to build up their organization. These peculiar constituents are derived from the soil. Those soils that are destitute of the principles demanded by the particular plant to be cultivated, are sterile as regards that plant, and yet may be perfectly congenial to, and highly fertile for other plants, demanding other elements for their growth and perfection. Upon these well established facts rests the whole beautiful modern science of agriculture.

If then, geological formations exert an influence so clearly and distinctly marked upon the vegetable world, we should naturally look for a similar power exerted upon the animal kingdom.

In the lower orders of the animal creation, this influence is very obvious. Zoologists have long since well ascertained, that the distribution of testaceous mollusks, both terrestrial and fluviatile, is clearly traceable to the power exercised by geological formations. These animals may be scarcely said to have an existence in granitic districts, whereas in calcareous formations, they are exceedingly abundant. In the case of the fluviatile genera, as in aquatic plants, peculiar species are found in particular streams. It is a well known fact also, that certain species of fish inhabit certain streams, and are seldom or never detected in contiguous streams, although their waters are discharged into the same rivers or lakes. Even in the same lake, certain species occupy peculiar localities, in which other species are scarcely ever seen. It appears to me that the cause of these curious restrictions may be legitimately referred to a peculiar constitution of the waters.

How far the higher orders of animals are operated upon directly by geological constitution, has not yet been ascertained, for want of due observation, but I am strongly inclined to think that pro-

per attention directed to the subject would develop highly interesting and important facts. The indirect influence exerted through the medium of the vegetable kingdom, the source of sustenance of most animals, cannot be doubted.

It is well known that the animal organization, like that of plants, absolutely requires a large amount of certain inorganic substances for its development and well-being, derived, partly from the soil, indirectly through the medium of the vegetable kingdom, and partly directly from the water. We also know that the substances thus demanded are among the most decided physiological agents, as phosphorus, chlorine, fluorine, sulphur, soda, potash, lime, iron, &c. Another fact familiar to every practitioner is, that a deficiency in the human system of at least some of the above named substances, induces pathological conditions strongly marked by distinct pathognomonic signs; and that these signs are truthful indices, is proved by the fact that a supply of the deficient substances reproduces a normal condition of the system.

If, then, a deficit of these inorganic matters, and those among the least active, produces well-marked pathological conditions, it is very conceivable that an undue accumulation in the system of those much more active, should produce even a more decided effect. That such accumulations do occur, is more easily supposed, than the established fact that deficiencies occur. A long and uninterrupted residence upon certain geological formations, where the inorganic substances required by the system are either superabundant, very deficient, or even wanting, must necessarily produce a surcharge or deficit of them, and consequently are abnormal states.

By the light of recent discovery it appears that nature does not confine herself to a general distribution of those substances only, which are known to be imperiously required for the healthy existence of the animal organization, but that other powerful agents exist in a form to be readily received into its composition. Thus iodine, a very efficient agent, has been detected in various species of inland aquatic plants, among which is one at least, the nasturtium officinale, that is largely eaten as a salad. It is not at all improbable too, that bromine, so nearly allied to iodine and fluorine, will be found to be more generally distributed than was formerly supposed.

Here it appears to me is opened a wide and promising field for accurate observation, and above all, for the exercise of the late improved methods of quantitative chemistry. A close and careful investigation of the subjects hinted at in the foregoing remarks, holds out to my mind very flattering prospects of arriving at certainty in regard to the causes, cure and prevention of endemic and epidemic diseases, so long enshrouded in mystery and obscurity.

The hasty and necessarily imperfect observations collected by your Sanitary Committee of last year, of which I had the honor to be chairman, have already produced some encouraging results by connecting the study of diseases with geology. The well defined restriction of certain endemic and epidemic diseases to certain geological formations of our county, the almost entire exemption from some common affections on others, the remarkable difference of average longevity on different strata, are well calculated strongly to arrest the attention of the medical inquirer.

Should the conjecture thrown out as to the manner in which the system is effected by different strata, the source of soils so very different in their chemical composition, and of waters holding in solution the most opposite substances, prove fallacious, yet the facts just stated are sufficiently prominent to incite to more precise and closer investigation.

In all scientific researches an important step is to contract the compass of the field of investigation, and clearly to define its boundaries. The vagueness in our investigations of endemics and epidemics has too often resulted from the general and indefinite manner in which they have been conducted. The study of diseases, as they are confined to, or modified by geological formations, would so circumscribe the field of investigation as probably to lead to more definite conclusions.

I cannot resist on this occasion again to express my strong commendation of the resolution offered by Dr. Isaac Parrish to the State Medical Society at their last session, and adopted by that body, recommending the County Societies to procure geological surveys of their respective counties to serve as bases of their topographies. All topographies that are not founded on geology, are certainly and manifestly defective. Could we procure topographical histories upon this basis of every county in

the State, we should have a beautifully connected and intelligible system of great interest, even independently of the pathological results that may so resonably be expected.

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*A case of Spasmodic Asthma.* Reported by H. A. SWASEY, M.D. of Mississippi.

[The following case, though presenting nothing very novel, accompanied a communication from the author containing so much of the right spirit, that we cheerfully give it a place as desired. The author believes that every member of the medical profession has a just claim upon his brethren for whatever knowledge they may possess in regard to their common calling, and in this spirit makes his contribution to the therapeutics of a disease, at all times interesting and often difficult to manage.—EDS.]

A case of this disease which came under my care, some time in the beginning of January last, possessed so many points of interest in its previous history, and was so promptly relieved by a somewhat novel treatment, that I have thought a record of it worth preserving.

Oscar C., æt. 10, was taken, some few years ago, with a severe chill, followed by high fever, which however soon subsided, leaving the system to all appearances free from disease. On the day following, he was attacked with "something like a fit," as his parents express it, accompanied by great dyspnœa, which continued unmitigated after the subsidence of the convulsive paroxysm.

A Physician, Dr. W., was now called in, who, finding considerable soreness and some little pain in the chest, pronounced it *pleuro-pneumonia*, and prescribed accordingly, with no appreciable benefit.

The attack, however, gradually wore off, although a shortness of breath remained, and the slightest exertion produced considerable dyspnœa. A year passed by, when, without any premonition, or assignable cause, another attack supervened, similar in almost every respect to the first. Another physician, Dr. M., was now called, who, after a *thorough* exploration, pronounced

the disease "the *consequence* of a *deformed chest*," and declined, I believe, doing anything for the case. At any rate no very efficient remedies were prescribed, for the disease continued to return occasionally, though with less violence, during the next six months, when the parents of the sufferer, almost in despair, called in another physician, Dr. D., who pronounced it *asthma*, prescribed tinct. lobelia in emetic doses,—instructed the parents in the indications for its use, mode of administration, etc., and left the patient in their hands. The remedy seemed a good one, for by its use all severe attacks were warded off during a period of nearly a year and a half, when its power over the disease seemed to be entirely annulled. Ipecac. was then substituted, but it, too, was inefficient in relieving the paroxysms, which had now become so severe as to be accompanied by general convulsions.

It was in one of these convulsive attacks that I was requested to see him. When I reached Mr. C.'s, some two miles distant, the spasmodic paroxysm had subsided, but the dyspnœa was almost suffocative. The symptoms were, unmistakably, those of spasmodic asthma. I ordered an emetic of ipecac. and tinct. lobelia to be given immediately, and its prompt action insured by copious draughts of warm water. It operated finely, ejecting from the stomach a considerable quantity of mucus and crude ingesta, to the no small, but not entire relief of the patient. Chloroform was then administered by inhalation, until its soporific effects were induced. All difficulty of respiration disappeared, and the patient slept quietly.

Not daring to trust the administration of chloroform, *by inhalation*, to the hands of the parents, considering it as I do "a good servant but a bad master," I left a mixture composed of equal parts of chloroform, sul. ether, and tinct. opii cam., "to be given, 30 drops at a time, in syrup, as soon as the symptoms of the next paroxysm made their appearance. The dose to be repeated every half hour until the attack is subdued."

It has been nearly a year since this "abortive" treatment was first made use of in this case, and the parents inform me that it "acts like a charm," that a few doses of the medicine never fail to produce the desired effect.

This treatment may, of course, need further modification,

according to the peculiarities of each particular case, but having used it in two or three other less severe cases of pure spasmodic asthma, with the happiest results, I am inclined to consider it a most valuable course, and one eminently worthy of more extended trial.

P. S. I would remark, in justice to the gentlemen referred to above, that they all stood high in the ranks of our profession.

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*Case of Bed-sore successfully treated by a Galvanic Current.* By W. S. W. RUSCHENBERGER, M. D., Surgeon, U. S. Navy.

Leopold Rogers, seaman, æt. 24, was admitted into the U. S. Naval Hospital, New York, June 3d, 1844, (then under my charge) from the U. S. ship Columbus, in which vessel he returned an invalid from the U. S. ship Congress. He suffered for a long time from syphilitic rheumatism and enlarged indurated testes. The preparations of iodine had been employed both internally and externally; and local depletion, the deutiodide of mercury, muriate of ammonia, &c., had been resorted to without much, if any advantage. On admission, his general condition of health was feeble; he was emaciated; slight pressure over the epigastrium produced pain; pulse small, and tongue coated in the centre, with clean, bright red edges. The testes were considerably enlarged, hard, tender; and the scrotum elastic.

He suffered paroxysms of severe pain in the testes and extremities at night; he was not able to rise from his bed. Tonics and anodynes were prescribed with a light nutritious diet, and poultices of stramonium leaves were applied to the scrotum.

On the 3d July, slight improvement of his condition was noted; paroxysms of pain less frequent, and of shorter duration; the testes were diminished and were "less irregular" on the surface. On the 18th, a large slough had formed on the right side of the spine from pressure; its edges were touched with nitrate of silver and a poultice applied.

23d. No improvement; anorexia; sloughs separating from ulcer on back.

29th. ℞. Acid. arsenios, . . . . gr. j.
Cicutæ Ext., . . . . gr. xxiv.
M. S. a. ft. mas. et in pil. xlviii dividend.
Cap. 1. ter die. Diet and anodynes, &c., continued.

*August 4th*, 6 o'clock P. M.—Delirious; pulse frequent and soft; twitching of muscles of neck; skin dry, but of normal temperature; frequent deglutition; "says he is quite well."

5th.—Appears to be perfectly sensible this morning. Suspend all medicine. ℞. Liq. ammoniæ acetat. ʒss. every two hours during the day; and at bedtime, tinct. opii acetat. ʒj.

6th.—Passed a good night. The ulcer on the back is two inches in diameter; edges raised and indurated; surface cupped and sloughy, without any signs of healthy granulations.

The general condition of the patient, and his long confinement, as well as the little benefit derived from the treatment of the bed-sore which had become a source of great irritation and annoyance, led to an unfavorable prognosis. But little amelioration could be anticipated, unless the ulcer on the back could be healed.

In the autumn of 1842, I had resorted to Mr. Mansford's galvanic plates, in the treatment of a case of epilepsy, and found difficulty in preventing the surface under the silver plate from healing. I discovered, however, that by alternating the zinc and silver plates, that a discharge was kept up from both blistered surfaces, and that either would heal under the continuous application of the silver plate, in the course of a few days, while ulceration extended, seemingly, in a corresponding manner, under the zinc.

This circumstance suggested a trial of Mr. Mansford's plates in the treatment of the bed-sore in the case of Rogers. As he suffered very much from pain and swelling about the right malleolus externus, a blister two inches square was applied over it at night. On the morning of the 7th of August, the cuticle was removed, and Mr. Mansford's plates applied, the silver plate being placed over the ulcer on the back and the zinc over the ankle: the plates were about two inches in diameter; slips of buckskin were substituted for muscle, which is directed by Mr. Mansford. A full description of the apparatus and its mode of application, may be found in Professor Dunglison's very valuable work, entitled "New Remedies" under the head of "Galvanismus."

*August 11th.*—Ulcer is assuming a decidedly better aspect; granulations shooting up healthily; edges less elevated and not so thick; discharge laudable. Continue plates, changing the

dressing daily. Suspend liq. ammon. acetat.; resume pills of cicuta and arsenic; anodyne at night.

15th.—The surface beneath the zinc plate has become ulcerated; apply a blister an inch square over opposite malleolus. P. M. Transfer zinc plate to newly blistered surface.

21st.—The ulceration beneath the zinc plate so much extended that the apparatus is discontinued. Simple dressings to ankles; ceratum zinc. carb. to back.

26th.—Paroxysm of severe pain in ankles last night; relieved by anodynes.

28th.—Ulcers on back healing rapidly; those over the ankles nearly well.

A tonic treatment, with nourishing diet, and subsequently syrup of sarsaparilla with iodide of iron, were continued until January 16th, 1845; when the patient was discharged from the hospital, at his own request, almost entirely restored to health.

The application of this galvanic pair was continued during fourteen days, when the ulcer on the back had improved so much, that it could be treated, in my opinion, by the usual dressings. Had it been desirable to continue the apparatus, it would have been necessary only to remove the cuticle from other points for the accommodation of the zinc plate.

The above statement is made from notes of the case made by Passed Assistant Surgeon, Jas. B. Gould, U. S. Navy.

The July number of the "Medical Examiner" for 1851, (p. 481) contains a notice of a case of "Indolent Ulcer, speedily cured by the Electric Moxa," prescribed by Mr. Bransby B. Cooper. A perusal of this notice, and of Professor May's description of a case of amputation at the hip joint, (published in "The American Journal of the Medical Sciences" for October, 1851, p. 218) in which the patient suffered from "sloughing over the sacrum, induced by pressure," reminded me of my satisfactory experiment in the case of Rogers; the above cases, in my estimation, added to its value as a single medical fact, which is perhaps worthy of record.

My friend, the late Dr. Washington of New York, at my suggestion treated a similar case with the same success, in the winter of 1845.

*Philadelphia, December*, 1851.

*Extracts from a Lecture "On the present position in Europe of some of the most interesting and important points of Modern Surgery," recently delivered as an Introductory Discourse.* By THOMAS D. MÜTTER, M. D., Professor of Surgery in Jefferson Medical College, Philadelphia.

*Anesthesia.*—My attention, naturally enough, was first directed to the subject of anesthesia. I need not, on this occasion, enter upon the history of this purely *American* discovery. I repeat purely *American discovery*, for, notwithstanding the attempts made by some, to give the credit of this most valuable of all modern improvements in surgery to Europeans, we have yet positive evidence of its being in truth an offspring of the New World. I do not pretend that efforts to mitigate the suffering attendant upon surgical operations were not made long before the introduction of the new process by the inhalation of some sedative agent. In fact, in all ages, surgeons have endeavored to attain, by various measures, this truly important end. Thus we read in Middleton's tragedy of "Woman, beware Woman," published in 1657,

> "I'll imitate the pities of old Surgeons
> To the lost limb; who, ere they show their art,
> Cast one asleep; then, cut the diseased part."

But I contend, that we have no authority for supposing that prior to the introduction of ethereal inhalations in this country, any agent of the same class had ever been elsewhere practically employed.

It is true that Beddoes and Davy had suggested and even used the nitrous oxide gas, with the view of producing anesthesia, but the experiment attracted little notice and was soon forgotten; and to the American really belongs the honor of having brought to light the immense value of anesthetic agents, in the treatment of painful disorders, or the performance of surgical operations.

Having said this much in defence of our rights, I may proceed to state in what estimation the measure is held abroad, and a few words will suffice to do this.

In England, Scotland and Ireland, and on every portion of the

continent of Europe, it would appear, that no surgeon of any grade, high or low, pretends to practice his profession without the constant use of some anesthetic agent. When I asked my distinguished friends in London and Paris, if they employed the measure with the same degree of confidence as at first, they seemed surprised at the question, and unhesitatingly declared, that no surgeon would presume to perform a serious operation without first bringing his patient into a state of anesthesia, provided always, there was nothing present to contraindicate the production of this condition. While there exists some difference of opinion as to the best agent to be used, there is none upon the great point of the value of the measure in the practice of surgery. The agent usually employed is *chloroform*, a fluid first used to any extent by Dr. Simpson, of Edinburgh; and it would appear that very few cases of serious consequences resulting from its employment, have been met with either in public or private practice. With us, however, the reports are not so satisfactory, and hence, some, myself among the number, still prefer the original preparation of sulphuric ether, or else a mixture of the two forming a new fluid called *chloric ether*. Attempts have been made to substitute other fluids, but up to the present time *ether* and *chloroform* are considered by far the safest and most to be relied upon.

The *Bromohydric Ether*, discovered by M. Robin of Paris, has recently attracted some attention, but is not at all in general use.

But, general anesthesia is not alone resorted to. An attempt to obtain a similar condition *locally*, is also a favorite measure. Up to the present moment, however, the experiments with this view, have not been as satisfactory as could be desired. The famous "*Eau Hollandaise*," or "*Ether Chlorohydrique Chloré*," from which so much was anticipated, seems to have proven a total failure, while the "*frigorific mixture*" of Mr. Arnott has likewise been "found wanting" in many of the cases to which it has been applied.

I cannot attempt in this place to indicate the method of using anesthetic agents, nor can I point out the cases most proper for their application. These matters must be left to the general lectures and to the clinic, in which an ample field for observing the practical working of the measure will be afforded you.

Before leaving the subject, I may remark, that in *France* at least, the use of chloroform or ether is chiefly confined to surgical practice, very few using anesthetic influence in obstetrics. In Great Britain, on the other hand, it is much employed in both departments of the profession.

*The Microscope.*—The next point of interest to which my attention was directed, was the influence of microscopic observations in surgery. In *Anatomy* and *Physiology* so much has been gained by the use of the microscope, that I was led to hope that our department had also been enriched through the agency of this most wonderful instrument—nor was I disappointed. In the study of *malignant growths*, much has been discovered both novel and practically useful. Again, in the examination of *secretions*, the microscope has proved of great value. For example, we are able to decide in cases of deep ulcer over a bone, by examining the pus, whether or not the bone is diseased. The presence of pus in the sputa can only be detected by the microscope. It is also of great value in the diagnosis of certain diseases of the *kidney and bladder*. Without it, Mr. Quekett could never have made the wonderful discovery that a *urinary calculus*, a solid stone, is in *reality organized*; and by its use alone can we ever arrive at a correct classification of *Tumors*. The application of the microscope in surgical pathology, however, is still almost an untrodden field, and he who now determines to enter upon its cultivation, will most assuredly reap a rich harvest of renown for himself, and confer lasting benefits upon humanity and science.

*Wounds.*—The next subject of interest, to which I shall direct your attention, is the manner in which extensive wounds are dressed, at the present time, in Europe, and you will naturally enough be surprised to learn that in a matter of such vital importance, there should exist any diversity of opinion among surgeons as to the proper method of treatment; and yet there is scarcely a point in practical surgery, that has elicited more controversy and discussion. The *French*, with but very few exceptions, still adhere to the original views of some of their older authorities, and unite all extensive wounds by the *second intention* of Hunter; while the British surgeons, like most of us, adopt a plan directly the reverse, and endeavor to obtain, as far as possible, union by the

*first intention* of Hunter, or simple adhesion. It afforded me no slight gratification to find, that the principles I have so often inculcated here, in reference to this subject, should be those upon which the practice of such men as Brodie, Lawrence, Stanley, Guthrie, Travers, Furgusson, Phillips, and others of high reputation, have for many years been based, and I was thus fully convinced of the propriety of attempting, when the case justifies such an attempt, the immediate union of a wound. I cannot, at this time, present you with the arguments advanced by the French for adhering to the reverse of this treatment, but on a proper occasion they will all be fully explained.

From what I could learn, the continental surgeons, out of France, are gradually adopting the modern English and American method; and instead of covering up their wounds with great bundles of charpie, or that filthy abomination, a poultice, apply the lightest dressing, and frequently employ nothing but *cold water*, as recommended especially by many of the older surgeons, and more recently by Larrey, McCartney and Liston.

*Traumatic Hemorrhage.*—In the management of *traumatic hemorrhage*, there has been little or no improvement. In fact, surgeons have long since settled down upon the great indications to be observed in such cases, and hence there is but little room for improvement. *Forced flexion* in wounds of the extremities, however, deserves notice and may in many cases prove eminently serviceable. This new measure appears first in the "Anatomie Chirurgicale" of Malgaigne, and has been successful in some few cases, especially in one reported by M. Durwell in the London Medical Gazette.

*Syphilis.*—While in Paris my attention was especially directed to the subject of syphilitic diseases, from the circumstance that the highest authority upon this class of affections still exercises his functions as professor in the "Hospital du Midi." Ricord, by birth a Baltimorean, but for many years a resident of Paris, has long since rendered himself famous in the management of the class of diseases just referred to, and I found that his views, promulgated, some of them, many years since, have undergone very little modification. He still uses mercury in primary syphilis, and considers it the only true and safe remedy. The preparation employed is the proto-ioduret, and my own

observations agree with his, in establishing this as the best of all the mercurials, in the treatment of indurated chancre or bubo. *Mercurial fumigation* he also recommends in the strongest terms, as a safe and speedy method of bringing a patient under the influence of the specific.

In phagedenic chancre, *iron* is beyond all question the remedy to be employed internally, while mercury here is almost sure to act as a poison.

Tertiary syphilis he still treats with iodide of potassium as his sheet anchor, and contends, that to be of permanent benefit, it must be administered in large doses.

*Cancer*, in all its phases, has recently been closely investigated by Muller, Langenbeck, Carmichael, Bennett, Quekett, Walshe, Simon, Rokitansky, Libert, and others, but I fear much remains to be done ere we arrive at its true origin and proper treatment. No question seems to exist as to our power of communicating the disease by inoculation. If, for example, we mix a little cancerous matter with water, and inject the mixture into the venous circulation of any animal, we to a certainty induce cancerous deposits in different parts of the body, and especially in the pulmonary veins. The truth of this statement has recently been verified by my friend Dr. Leidy, of this city, who has succeeded in establishing the disease by inoculation even in cold blooded animals; for instance, a frog. With respect to some of the various attempts recently made to cure the disease radically, the plans of Jobert, Lisfranc, Dieffenbach, Phillips, and Arnott, appear to have attracted most attention.

The method of Jobert, which consists in the application of a ligature to all the principal arteries supplying the tumor, and the division of its nervous filaments, seems to have acquired no great reputation, and I scarcely heard it alluded to by the surgeons of London and Paris. The same may be said of the process of Lisfranc, which proposes in cases of superficial cancer in any organ, the removal of the *diseased tissue*, either with the ligature or knife, leaving the organs upon which it happens to be located untouched. The method of Dieffenbach, Phillips, or Martinet de la Cruse, for all claim the merit of the invention, differs from the ordinary operation in this: instead of allowing the wound made during the removal of the tumor to heal by

granulation, which is usually permitted to a certain extent in all cases of extensive dissection, a flap of sound skin is taken from the adjacent parts and brought over the raw surface, so that union takes place, and thus prevents the granulating process. It is supposed by the authors of this plan, that the application of the healthy skin to the surface from which the cancerous mass has been removed, will so change the vital action in the part, that health will take the place of disease, and hence a return of the complaint be effectually prevented. But unfortunately, experience is against the operation, and if cancer is a constitutional affection, as it often is, it is difficult to imagine that it could prove so useful as we have been led to suppose. I have, myself, tried the experiment in several cases, but the disease has invariably returned, and I find such to have been the result in the practice of others. The operation will, in all probability, be speedily forgotten, along with a host of other "novelties" that are fast wending their way to the "tomb of all the Capulets!" Mr. Arnott, of London, has recently revived the method of *Recamier*, which consists in the methodic and continued application of pressure to the diseased mass. Experience, so far at least, is against this measure, but in hopeless cases, those, for instance, in which the knife promises nothing, it may be employed, as it will serve to satisfy the patient in part, and prevent, to a certain degree, that terrible sickness of heart that overwhelms a poor sufferer when utterly abandoned by the surgeon.

Recently, Dr. James Arnott, of Brighton, has published some interesting facts which go to prove the value, as a *palliative measure* at least, of the application to cancerous tumors, of a very low degree of temperature, the parts being in fact *frozen*, or nearly so. If his statements are to be relied upon, this is certainly a measure deserving the notice of surgeons.

*Pleurisy.*—An operation altogether novel in the disease for which it was practised, has been introduced by Professor Trousseau of Paris, one of the most distinguished practitioners of that city of of eminent medical men. Professor Trousseau told me that he has succeeded in relieving several patients who were almost in articulo mortis; and I have myself known it to accomplish the same end. The operation is nothing more than the evacuation of the fluid in cases of *acute pleurisy*. You are aware that the secretion is here often exceedingly rapid, and unless the lung

be relieved, the patient must die of suffocation. When, therefore, you find a patient thus situated, recollect that paracentesis thoracis, promptly performed, will probably afford immediate relief.

*Injection of Joints.*—Some of you are doubtless aware of the tedious nature of certain chronic inflammatory affections of the joints, especially of the larger ones. Now it has been proposed and the experiment repeatedly tried, to *inject* the *cavity* of the joint diseased, just as we would the tunica vaginalis in hydrocele, with some stimulating fluid, with the view of causing a new action in the secreting surface, by which either adhesion would be accomplished, or a check put to the excessive secretion of the fluid. In England I found the surgeons generally opposed to the operation, as one fraught with great danger, but in Paris it seemed to be quite a popular measure. Velpeau and Jobert both advise it, but I must confess that I saw nothing to induce me to join in this opinion. It is beyond question a most serious operation, and has caused the death of more than one unfortunate patient. The fluid used by the French surgeons is the *tincture of iodine*, and certainly this is much the least hazardous agent.

*Ascites.*—Attempts to cure *ascites* on the same principle, have recently been made by Drs. Dieulafoy, Leriche of Lyons, and Bonnet. *Five* cases of *cure* resulting from iodine *injections*, are reported by the first named gentleman; and the last gives a history of *fifteen*, treated by the injection of *gases*, *water*, *iodine*, and other fluids, *fourteen* of which recovered, only one dying. This is certainly most astonishing success, but the practice of others has proved by no means so devoid of risk. In fact just before I reached Paris, a patient upon whom the operation had been performed, perished most miserably.

*Excision of the Joints.*—In diseases of the joints, complicated with serious lesion of the bones, the operation of excision is becoming quite a favorite measure, particularly in England. The head of the femur, the elbow joint, and even the knee, had been removed just before I reached London, and I was told that success followed each operation. This measure is not, however, a novelty, as it was recommended long since by White and Moreau, and has from time to time been performed by surgeons both at home and abroad.

(To be continued.)

## BIBLIOGRAPHICAL NOTICES.

*Lehrbuch der physiologischen Chemie.* Von Prof. Dr. C. G. Lehmann. Zweite gänzlich neu umgearbeitete Auflage. 8vo. Erster Band, S. 464. Zweiter Band, S. 463. Leipzig, 1850.

*Manual of Physiological Chemistry.* By. Prof. Dr. C. G. LEHMANN. Leipz., 1850.

*Handbuch der physiologischen und pathologischen Chemie nach den neuesten Quellen:* bearbeitet von DR. A. MOSER und DR. J. C. STRAHL. 8vo. S. 759. Leipzig, 1851.

*Manual of Physiological and Pathological Chemistry, after the most recent sources.* Prepared by DR. A. MOSER and DR. J. C. STRAHL. Leipzig, 1851.

*Physiologie des Stoffwechsels in Pflanzen und Thieren.* Ein Handbuch für Naturforscher, Landwirthe und Aerzte, von DR. JAC. MOLESCHOTT, Privatdocentem der Physiologie an der Universität zu Heidelberg. 8vo. S. 592. Erlangen, 1851.

*Physiology of the Interchange of Matter in Plants and Animals.* A Manual for Naturalists, Agriculturists, and Physicians. By Dr. JAC. MOLESCHOTT, &c., &c. Erlangen, 1851.

*Familiar Letters on Chemistry in its relations to Physiology, Dietetics, Agriculture, Commerce, and Political Economy.* By JUSTUS VON LIEBIG. Third edition, revised and much enlarged. 12mo. pp. 530. London, 1851.

The appearance of the books, of which the above are the titles, is ample evidence of the direction which the investigations of observers are taking in Germany; yet although a greater number of works on physiological and pathological chemistry are issued from the teeming press of that country, it would be scarcely justifiable to infer, that more importance is attached to the subject there than elsewhere. The fact, indeed, that the "Familiar Letters on Chemistry," now before us, have reached a third edition in England, is sufficient to show the direction of the professional and general mind in that country, and if we were possessed of an accurate knowledge of the number of copies

of the different works of that distinguished chemist, which have been circulated in this country, we should be astonished at it. To every physician, naturalist, agriculturist, and educated gentleman, the name of Liebig is as familiar as that of Sir Humphry Davy was formerly; and perhaps, amongst the medical profession, the reputation of the former has been even more diffused, owing to the various speculations to which his observations have given rise—on biological subjects more especially.

It may perhaps be esteemed a work of supererogation, at the present day, to expatiate on the advantages of physiological chemistry in elucidating the laws of life, both in the healthy and morbid condition, and yet we are satisfied that, with many, they are overlooked or too lightly regarded, and hence these points are dwelt upon in almost all the treatises of the day on both subjects.

"It is not unworthy of remark," says Liebig, "that many physicians profess to hold chemistry in contempt, exactly as they do with physiology; that medicine reproaches physiology, and with equal injustice as she reproaches chemistry. The physician, who has learned medicine not as a science, but as an empirical art, acknowledges no principles, but only *rules* derived from experience. The object of his inquiries is only whether a remedy, in any given case, had a good or a bad effect. This is all the empiric cares about. He never asks *why?* He never inquires into the *causes* of what he observes!

"From what a different point of view should we contemplate the abnormal or diseased conditions of the human body; if we were first thoroughly acquainted with its normal conditions, if we had established the science of physiology upon a satisfactory basis. How differently would the treatment of diseases be conducted, if we had perfectly clear notions of the processes of digestion, assimilation and excretion. Without just views of force, cause and effect, without a clear insight into the very essence of natural phenomena, without a solid physiological and chemical education, is it to be wondered at, that men, in other respects rational, should defend the most absurd notions; that the doctrines of Hahnemann should prevail in Germany, and find disciples in all countries. Reason alone will not prevent whole nations from falling into the most abject superstitions, whilst even a child,

whose mind has been duly developed and instructed, will repudiate the fear of ghosts and hobgoblins. Can men who do not apprehend the nature of scientific investigation in a philosophical spirit, and who cannot interpret the language of phenomena,—can such men be expected to derive the least advantage from the discoveries of chemistry or physiology; and can they be deemed capable of making the most insignificant application to practical purposes of these discoveries? We often see such persons annoyed, that truth should be so simple, and yet, in despite of all their efforts, they cannot succeed in deriving from it any practical advantages. From such persons emanate the most absurd, nay impossible notions, and they have created for themselves, under the name of the *vis vitæ*, a miraculous theory by which they would explain all the phenomena they are unable to understand. With a totally incomprehensible, indefinable something they would arrest inquiry, and explain every thing which is not incomprehensible. But this *vis vitæ* is itself but a subject of investigation, and in order to explore it, to comprehend its essence, to understand its operations and effects, the physician must pursue the same method, which has been followed in natural philosophy and chemistry with such signal success." p. 14.

Assuredly, it is to chemistry that we are to look for a better acquaintance with many of the phenomena, which are presented by organized bodies; and we only veil our ignorance by words, when we refer them to vital or organic action. In the particular interchange of material that takes place in the composition and decomposition of the tissues, chemistry must play an important part; and the title embraced by Moleschott in one of the works now before us, "*Physiology of the interchange of matter in plants and animals*," is pregnant with meaning. It embraces, in other words, the physiology of chemistry in action in all organized bodies.

It will obviously be inconsistent with the limits of our Journal to attempt an analysis of works so full of detail as those before us. That of Lehmann has long been known, and highly appreciated. The first edition was published nearly ten years ago; and is the source from which much valuable material has been obtained by after inquirers. His experiments on the effect of food of different kinds—animal, vegetable and mixed—on the

urine, are familiar to every chemist and physiologist, and his reputation has not been confined to his fatherland, but has extended to every country in which chemical and physiological knowledge has been cultivated. Like Moleschott, Lehmann is not merely an observer, but a philosopher. Not only does he interrogate by experiment, but he observes accurately; and from the observation of phenomena he seeks to ascend to their laws. Hence, the Lehrbuch before us is not simply a detail of facts or phenomena, but an examination into the principles of physiological chemistry in all their applications. With Bacon, he considers that "the true philosopher always seeks to explain and illustrate nature by means of facts, of phenomena; that is, by experiments, the devising and discovery of which is his task, and by which he causes the object of his investigation to speak, as it were intelligibly to him. No single isolated phenomenon taken by itself, can furnish us with its own explanation; but it is by carefully observing and arranging all such facts as are in connection with it, that insight into its nature is attained. For we must never forget that every phenomenon has its reason, every effect its *cause*."—Liebig, p. 15.

After a methodological introduction, in which he depicts the aims and objects of physiological chemistry, and the best means of deriving full advantage from it, Prof. Lehmann inquires into what he terms the "organic substrata of the animal organism." These he investigates in the following order,—the butyric acid group—the succinic acid group—the benzoic acid group—the lactic acid group—the solid fatty acids—the oleaginous fatty acids—the resinous acids—the non-oxygenous alkaloids—the oxygenous alkaloids—the conjugated acids—the haloid bases and haloid salts—the lipoids, (cholesterin, serolin, &c.)—the non-nitrogenous neutral bodies—coloring matters—extractive matters—nitrogenous histogenetic matters (protein combinations) and the mineral substances in the animal body. The consideration of these occupies the whole of the first volume. The second embraces the animal juices, saliva, gastric juice, bile, pancreatic juice, succus intestinalis, fæces, blood, chyle, lymph, transudations, milk, sperm, fluids of the ovum, mucus, secretions of the skin, and urine.

On all these points much valuable information is given, the re-

sult of the investigations of the author and others. The acid of the gastric juice he considers to be the lactic, and he accounts for the fact, that free chlorohydric acid passes over in distillation, by the decomposition of the chlorides by the lactic acid at a high temperature; but this does not explain the marked smell of chlorohydric acid, which was observed in every specimen of gastric juice obtained from the Canadian with the fistulous opening into the stomach, who was the subject of the experiments of Dr. Beaumont. Prof. Lehmann, and Messrs. Moser and Strahl detail the discordant views of observers on this matter, which sufficiently exhibit what a discrepancy of opinion still exists amongst chemists in regard to the precise acid that gives the acid character to the gastric juice. It is well known that a nitrogenized body, called pepsin, probably plays an important part in digestion, acting in the same manner as the diastase in plants, and disposing the elements of the food to enter into combination with the gastric acids. Of itself it appears to possess no digestive power, for if the acids be neutralized by alkalies its efficacy is destroyed.—"This," says Dr. Moleschott, "has led Schmidt to the ingenious conjecture that the chlorohydric acid, which was seen by some observers—as Dunglison—to pass over on distilling the gastric juice, is originally paired or conjugated with the pepsin. The conjugated bodies are called by Schmidt chloro-pepso-hydric acid — (Chlorpepsinwasserstoffsaeure.) By strong acids and alkalies, the complex acid, which Schmidt compares to the sulpho-lignic, is decomposed, and in entire accordance with the idea of a conjugated acid, the pepsin which has been thrown down by an alkali does not again unite with its fellow; and hence the digestive property is lost. The same effect is produced by an elevated temperature. At 40° the chloro-pepso-hydric acid, undecompesed, thickens; at 70° the solution becomes turbid; and at 100° the pure pepsin separates in flakes; the fluid portion being dilute chlorohydric acid. Here again, consequently, the efficacy of the conjugated acid is annihilated. Fresh chloro-pepso-hydric acid forms salts with albumen, which, according to Schmidt, are the soluble peptones that arise from the digestion of albuminous substances. Their quantity is limited by the amount of chloro-pepso-hydric acid. They are increased by the addition, in proper limits, of free

chlorohydric acid, which decomposes the chloro-pepso-hydric albuminate, forms soluble chlorohydric albumen and sets at liberty fresh portions of the conjugated acid. Gradually, the fluid is saturated with the soluble combinations of albumen, the chloro-pepso-hydric acid is decomposed, and the whole affair is accomplished." p. 424.

This view of Schmidt, is considered by Dr. Moleschott to be the most ingenious and the most explanatory of the phenomena of any yet prepared; and hence he the more regrets that Schmidt has not been able to present, or offer the analysis of any chloro-pepso-hydric salt.

The Handbuch of Physiological and Pathological Chemistry of Drs. Moser and Strahl forms a part of the "Encyclopædia of the Medical Sciences," of which Dr. Moser is the Editor. Like all encyclopedic treatises, it is, of course, a condensed view of the existing condition of the subject, not necessarily enriched by the experiments of the author. It is a valuable exposition, however, which may be consulted with marked benefit. It consists of an introduction, which embraces an inquiry into the properties of organic matters, in contradistinction to the inorganic; the general chemical relations of the animal organism; the analysis of organic matters in general; the necessary apparatus for chemical investigations, &c.; after which are considered, *seriatim*, the anorganic and the organic constituents of the organism; the solids and the fluids; with a brief appendix on the chemistry of disease.

The work of Dr. Moleschott is more comprehensive and more physiological in its scope and character than either of those referred to. The author is accustomed to physiological researches, and is withal an excellent observer and accurate reasoner. His work, as the title imports, is not intended alone for the physician, but for the naturalist and the agriculturist. An enumeration of the titles of the different chapters will convey some idea of the vast amount of important matter embraced in it. They are: the sources of the nutrition of plants; the formation of the generally distributed constituents of plants and animals; history of the generally distributed constituents of plants and

animals in the living body; and the disintegration of organic matters after death. Under these heads, the nature of the the soil, air and water; digestion, the chyle, the blood, the tissues, secretions, &c., are investigated, with all the lights that had been shed upon them by former and contemporaneous observers, with whose labors the author had made himself familiar. It is eminently a work that indicates the direction in which the biologist of the day should look for an increase to his knowledge of living phenomena.

The title of the work of Liebig guides us to the nature of the subjects discussed in it. It has been long before the public, and the English translation appears for the third time, with numerous modifications and improvements by its distinguished author. It is a delightful volume, not only for the physician, but for every one who is desirous of forming some acquaintance with the deeply interesting topics of which it treats. It is dedicated to Sir James Clark, and is edited, at the request of the author, by his friend Dr. Gregory; and "from his intimate familiarity with chemical science, and more especially with the physiological subjects treated of, the author is confident that the task could not have been entrusted to better hands." Would that Dr. Gregory had not detracted from the force of this compliment, and injured his fair fame by visionary speculations in the domain of physiology, which compelled us, on a recent occasion, to put the stamp of reprobation on one of his productions, and to regret that he should not have confined himself to chemical facts, with which alone he seems to be really familiar!

To the present edition the author has been induced to prefix a series of letters on the origin and development of chemical science. He has also made large additions in the shape of new letters, containing the results of his researches during the last few years in agricultural and physiological chemistry. The object of dietetics has received from him particular attention, and the "Letters" altogether merit increased attention in the shape in which they are now presented. We know not, indeed, any work of the kind, which is more captivating, and presents greater attractions to the professional and general inquirer. From his first letter we make the following interesting extract, with which we are compelled to conclude.

"It is certainly not conformable to a rational philosophy of nature to attempt an explanation of the processes of formation, nutrition, and secretion in the animal body, before we have obtained a correct knowledge of alimentary substances, and the sources whence they originate, and before albumen, cascine, blood, bile, cerebral substances, &c., had been subjected to a searching investigation. Before these substances have been successfully analyzed, they are mere names, the letters composing which, at the utmost, we know, but whose signification is unknown.

How can it be expected that any useful information should be derived from the mere terms, until the properties and relations of the substances themselves are known; until we have studied the metamorphoses they undergo when in contact with other bodies; until, in short, we have forced them to speak in answer to our questions?

The cause of the phenomena of life is a force, which does not act at sensible distances; its activity becomes manifest only when the aliments or the blood come into immediate contact with the organ destined for their reception or alteration. The chemical force manifests itself precisely in the same manner; indeed, there are no causes in nature producing motion or change in bodies—no powers more closely allied to each other, than the chemical and vital forces. We know that wherever different substances are brought into contact with each other, chemical actions take place. To suppose that one of the most energetic powers of nature should take no part in the processes of the animal organism, although here all the conditions under which it commonly manifests its activity are united, would be against every established rule for the proper study of nature. But so far from there being any foundation for the opinion that chemical force is subordinate to the vital power, so as to become inoperative or imperceptible to us, the chemical effects of oxygen, in the process of respiration, (for example) are seen in full activity during every second of life. Moreover, *urea*, *allantoine*, the acid which is found in *ants* and *water-beetles*, namely *formic acid*, *oxalic acid*, the oils of *valerian root*, of the *spiræa ulmaria*, of the *gualtheria procumbens*, are products of the vital process, &c.; but is their production, we must ask, attributable to the vital force?

We are able to produce all these compounds by chemical processes, that is, by the chemical force. The chemist produces the crystalline substance found in the fluid of the allantois of the cow, from the excrements of snakes and birds: he makes urea from charred blood; sugar, formic acid, and oxalic acid from saw-dust; the volatile oil of *spiræa ulmaria*, of *gualtheria procumbens*, from willow bark; the volatile oil of valerian from potatoes. These results are enough to justify us in entertaining the hope that we shall, ere long, succeed in producing *quinine* and *morphine*, and those combinations of elements of which *albumen* and *fibrine*, or muscular fibre, consist, with all their characteristic properties.

Let us, however, carefully distinguish those effects which belong to the chemical, from those which depend peculiarly upon the vital force,

and we shall then be in the right channel for obtaining an insight into the latter. Chemical action will never be able to produce an eye, a hair, or a leaf. But we know, with absolute certainty, that the formation of hydro-cyanic acid and of the oil of bitter almonds, in those seeds, of oil of mustard and of sinapine in mustard, and of sugar in germinating seeds; that all these are the results of chemical decompositions. We see that the stomach of the calf, when dead, with the addition of some hydro-chloric acid, acts upon flesh, and upon coagulated albumen, precisely in the sammer as the living stomach acts; that is, these substances become soluble, and are, in fact, digested. All this justifies us in inferring, that by the scientific investigation of nature, we shall arrive at a clear comprehension of the metamorphoses which alimentary substances undergo in the living organism, and of the action of remedies.

Without a profound study of chemistry and natural philosophy, physiology and medicine will obtain no light to guide them in the solution of their most important problems, that is, in the investigation of the laws of life, the vital processes, and the removal of abnormal states of the organism. Without a knowledge of chemical forces the nature and effects of the vital force cannot be fathomed; the scientific physician can expect to derive assistance from chemistry only when he shall have qualified himself to put his questions to the chemist correctly.

Commerce and the arts have already derived immeasurable advantages from the progress of chemistry; mineralogy has become a new science since regard has been had to the composition of minerals and the chemical relations of their constituents. If the composition and chemical nature of rocks and strata be not in like manner investigated (and this has hitherto been much neglected), it will be impossible to effect any considerable progress in geology. Chemistry, moreover, is the foundation of agriculture, and we cannot hope to give a scientific form and basis to this important art without a knowledge of the constituents of the soil, and of the substances which constitute the food of plants.

Without an acquaintance with Chemistry, the statesman must remain a stranger to the true vital interests of the state, to the means of its organic developement and improvement; his attention cannot become sufficiently alive, nor his perception adequately acute, in regard to what is really useful or injurious to his country,—to society. The highest economic or material interests of a country, the increased and more profitable production of food for man and animals, as well as the preservation and restoration of health, are most closely linked with the advancement and diffusion of the natural sciences, especially of Chemistry.

Without a knowledge of natural phenomena, and of the laws by which they are regulated, the human mind is incapable of forming an adequate conception of the greatness and unfathomable wisdom of the Creator; for all the images which the most inexhaustible fancy or the most cultivated intellect can form will appear, when compared with the reality, but as glittering, variegated, unsubstantial bubbles!

The great desideratum of the present age is practically manifested in

the establishment of schools, in which the natural sciences occupy the most prominent place in the course of instruction.

From these schools a more vigorous generation will come forth, powerful in understanding, qualified to appreciate and to accomplish all that is truly great, and to bring forth fruits of universal usefulness. Through them the resources, the wealth, and the strength of empires will be incalculably increased; and when, by the increase of knowledge, the weight which presses on human existence has been lightened, the difficulties of obtaining subsistence lessened, and man is no longer overwhelmed by the pressure of earthly cares and troubles, then, and not till then, will he be able to devote his intellect, purified and refined, to the study of higher subjects of investigation, and finally to the highest of all." p. 20.

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*The Elements of Materia Medica and Therapeutics.* By JONATHAN PEREIRA, M. D., F. R. S., L. S. Third American edition, enlarged and improved by the author. Edited by JOSEPH CARSON, M. D., Professor of Materia Medica and Pharmacy in the University of Pennsylvania, etc. Vol. 1, pp. 338. Philadelphia: Blanchard & Lea, 1852.

We noticed at some length the third London edition of this standard work,* the first volume of which was published in 1849. The American edition, lately issued by Messrs. Blanchard & Lea, has had the benefit of the supervision of Dr. Pereira, who has corrected the London edition, with a view to its publication in the United States. The formulæ of the British colleges have been revised, and made to correspond with the last decennial editions of the London and Dublin Pharmacopœias, and the author has also, he states, "embodied all recent discoveries of importance which relate to the subjects treated of in the work." The present American edition is, therefore, substantially a *new* edition of the author's, and commends itself to favorable regard, not only from having had the advantage of his valuable supervision, but also as an example of fair and proper dealing between him and his American publishers.

We must refer our readers to our recent extended notice of the corresponding London edition of this book—which is emphatically, as the American editor justly observes, "the most comprehensive treatise on the subject in the English language."

*Vol. V., (for 1849,) p. 162.

The additions of the American editor to this volume, (which is devoted to the consideration of *inorganic bodies,*) consist chiefly in the introduction of the nomenclature, formulæ, and processes of the United States Pharmacopœia. Of his valuable notices of indigenous articles, which have enriched the former American editions, we shall have occasion to speak at length on the appearance of the second volume, the publication of which is promised "in July or August, 1852."

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*A Complete Treatise on Midwifery: or the Theory and Practice of Tokology: including the diseases of Pregnancy, Labor, and the Puerperal state.* By ALF. A. L. M. VELPEAU, M. D. Translated from the French by CHARLES D. MEIGS, M. D., Professor of Midwifery in the Jefferson Medical College, &c. *Fourth American, with the additions from the last French edition,* by WM. BYRD PAGE, M. D., Lecturer on Obstetrics in the Philadelphia Medical Institute, &c. With numerous illustrations. Philadelphia: Lindsay & Blakiston, 1852.

We are pleased to welcome with the opening year a new edition of this most excellent and "*complete*" treatise on Midwifery. It justly takes rank amongst the most popular of its kindred, as is evidenced by the demand for a *fourth* American, from the *second* French edition. The preparation of the present issue has been confided to Dr. Page, a gentleman in every way competent to the task, who has introduced all the modifications of the author in the last edition, at the same time retaining the notes of Dr. Meigs. The work has been so thoroughly reviewed in previous numbers of this Journal, that a brief enumeration of the changes is all that our present limits will permit. The author details his emendations as follows:

> The first edition of this book was only the recapitulation of my lectures. I had particularly designed it for the use of students. I have in this endeavored to present, as nearly as possible, the actual state of the science, under the double aspect of theory and practice—my aim being to render it useful, not only to students, but also to practitioners, and even to those who are engaged in teaching this science.
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> The article concerning the pelvis is here entirely new in relation to its axis, its straits especially, and its vicious conformations. It is the same with that on the genital organs, regard being had to their varieties, to

the practical inductions which flow from them, and to the operations which they require.

I have completed the article on menstruation, and that on reproduction, by numerous additions; and what relates to the softening (*ramollissement*) of the symphysis during pregnancy, has been entirely rewritten.

I have added a great deal to the article on *touching*, and have endeavored to show the advantages of *touching* by the rectum, as well as of abdominal exploration, in a vast number of cases.

A long chapter upon auscultation seemed to me indispensable, and I have given it.

Extra-uterine pregnancies, their mechanism, their signs, their terminations, and especially their treatment, form the subject of an article almost entirely new.

False pregnancies, as well as double pregnancies, and superfœtation in general, are treated in the same manner. I have also renewed the article on abortion, especially in regard to the diseases of the ovum, of moles, and of the treatment required.

After these, the principal changes in this edition are:—

1st. Upon the mechanism of labor in general.

2d. Upon the mechanism of labor by the head—by the vertex first—then by the face, and finally by the pelvis: all subjects which have been discussed for fifteen or twenty years in foreign countries, and of which I intend to give a review, together with their explanation.

3d. Upon the assistance which the woman may require in natural labor, and particularly upon the use of ergot.

4th. Upon the hemorrhages (*pertes*) which occur during pregnancy, or in labor; especially upon the treatment of these affections, which I had not sufficiently dwelt upon, and of which the field has latterly been very much enlarged.

5th. Upon the shortness, too great length, twisting of the cord, and the accidents which may result from them.

6th. Upon the different ruptures sometimes observed in the course of labor.

7th. Upon tumors of the pelvis, and calculi of the bladder.

8th. Upon the coarctations of the vulva, vagina, and mouth of the uterus.

9th. Upon prolapsus of the uterus in its gravid state, deviations of its orifice, and its obliquities, properly so called.

10th. Upon the diseases, tumors, and deformities of the child, which may become causes of difficult labor.

11th. Upon the theory of spontaneous evolution, which I had scarcely mentioned, and which I have now treated at length, insisting upon the new explanation which this strange phenomenon admits of.

12th. Upon version, either by the head, or feet, and upon the relative value of these two operations, regarded in a new light.

13th. Upon presentations of the arm, and the management which they require.

14th. Upon diet, and the production of abortion and premature labor in cases of narrowness of the pelvis; questions scarcely mentioned in the first edition, and of which I thought it necessary to treat more fully in this.

15th. Upon the Cæsarian operation, either abdominal or vaginal, and upon symphysiotomy.

16th. Upon the operation for breaking up the head of the child, on which I had only said a word, and to which I have now endeavored to give its true value.

17th. Upon the cautions required in the delivery of the afterbirth.

18th. Upon the hourglass contraction on the placenta, and its retention in the uterus.

19th. Upon the possible absorption of the afterbirth; an article entirely new.

20th. Upon hemorrhage after accouchement, and the use of injections of the umbilical cord, compression over the hypogastric region, compression of the aorta, and transfusion as means of delivering women from the dangerous consequences of this accident.

21st. Upon the attentions to be given to the child, and upon the sanguine tumors on its head, which are sometimes produced in the birth; upon the flattening of the head, the falling off of the funis, and hemorrhage at the umbilicus; upon lactation, both natural and artificial; upon the dressing of the cord, and the operation of the fillet; and upon some slight indispositions of the newly-born infant.

22d. Upon the inversion of the uterus after delivery, and the principal changes which its neck undergoes after accouchement.

23d. Upon sanguine tumors of the vulva, hemorrhoids, retention of urine, inflammation of the genital organs, and the other consequences of childbirth.

24th. Upon ruptures of the uterus and vagina; upon recto-vaginal, vesico-vaginal, and urethro-vaginal fistulas.

25th. Upon perforations of the perineum, the consequences and frequency of them.

26th. Upon the lacerations of the perineum, and their treatment.

27th. Upon the engorgement of the breast, and fissures of the nipple, and also upon some of the qualities necessary for a good wet-nurse.

The seven last articles were not treated of in the edition of 1829.

Moreover, it may readily be conceived that I have thought proper to modify, more or less, all the other articles in my book, and that I have only particularized cursorily in this place those which have been rewritten or superadded.

The only point on which the work is not thoroughly posted up, is on the subject of Generation, a matter the less to be regretted, as we conceive its proper position to be in a Physiological treatise, rather than in work like that under notice.

*An Analytical Compendium of the various branches of Medical Science, for the use and examination of Students.* By JOHN NEILL, M. D., Demonstrator of Anatomy in the University of Pennsylvania, etc., and FRANCIS GURNEY SMITH, M. D., Lecturer on Physiology in the Philadelphia Association for Medical Instruction, etc. *Second Edition, revised and improved.* Philadelphia, Blanchard & Lea, 1852.

We notice with much pleasure the early call for a second edition of this useful work. The necessity for *compendiums* and *manuals*, for the benefit of students, particularly while in attendance upon lectures, when systematic study of voluminous text-books is impossible, has been long felt and admitted; and numerous publications of the kind have appeared both in Europe and this country. Of the volume before us, we can scarcely allow ourselves to speak in the terms which its great merit deserves; but its value and popularity have been attested by the rapid exhaustion of the first edition, published only three years since. The present edition has been carefully revised and improved, and in part re-written. It should be in the hands of every student in our medical colleges. B.

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*Lectures on Scarlet Fever.* By CASPAR MORRIS, M. D., Late Lecturer on Practical Medicine in the Philadelphia Medical Institute, Fellow of the College of Physicians of Philadelphia, &c. &c. Philadelphia: Lindsay & Blakiston, 1851.

These admirable lectures, with which our readers have been favored during the past year, have been separately paged, and neatly bound, and now form a handsome "brochure" upon this deeply interesting subject, which should be in the hands of every practitioner.

# THE MEDICAL EXAMINER.

## PHILADELPHIA, JANUARY, 1852.

With this number we enter upon the fifteenth year of our Journal-existence. In tendering our respectful acknowledgements to the profession for the steady and constantly increasing support which has been extended to the Examiner, we take the occasion to renew the pledge of our best exertions to render it worthy of support. Notwithstanding the growth of valuable journals in every quarter, we have the gratification to find that our columns continue the accepted organ of a large body of the most respectable and intelligent members of the profession of all sections of our country. With our department of '*Original Communications*,' we shall still connect, as heretofore, the publication of clinical and other lectures and hospital reports. In our '*Bibliographical*' department we shall endeavor to present succinct notices of all the new publications on medicine and the collateral sciences. The '*Record*' will be, as formerly, carefully collated from the various European and American journals, with proper attention to desirable *condensation* and *abridgement*. In the '*Editorial*' and '*News*' departments, we hope that our readers will find no abatement of interest, or relaxation of independence of tone and of devotion to the great cause of medical progress. We feel deeply the responsibility that devolves upon us from the editorial control of one of the oldest medical journals of the country; and we trust that we shall maintain its now well-established character.

### DELEGATES FROM THE MEDICAL SOCIETY OF DELAWARE.

At the annual meeting of the Medical Society of Delaware, held at Cantwell's Bridge, June 10th, 1851, the following named gentlemen were elected delegates from this Society to the American Medical Association, for the year 1852.

*New Castle County.*—Drs. James W. Thompson, Lewis P. Bush James Couper.

*Kent County.*—Drs. Isaac N. Jump, John D. Perkins, G. Saulsbury.

*Sussex County.*—Drs. W. W. Wolfe, George W. Maull, W. W Ricards.

B. F. CHATHAM, *Secretary.*

MONUMENT TO DR. JENNER.

We are gratified to learn that the subscription to this testimonial of the world's appreciation of Jenner's invaluable discovery, is progressing favorably in this city. We stated in a previous number that the originators in the movement were desirous that the opportunity of contributing towards it should not be confined to England, and that local committees would be appointed in the principal cities. In this city Drs. Robley Dunglison, G. B. Wood, and T. D. Mütter, have consented to serve, by whom we are authorized to say, that the smallest as well as the most liberal donations will be received.

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LACTATION IN AN INFANT.

Dr. John Hastings, of San Francisco, California, has sent us the following brief notes of a case of lactation in an infant.

"June 22d, 1851.—Mrs. Quiefelt was delivered of a healthy female child weighing ten pounds, whose breasts gave milk freely from the day of its birth until the 9th of August following. The mother is a Swede, about twenty-seven years of age, and stout and healthy, this being her sixth child. Neither the mammary glands, nor the nipples of the child, were unusually developed."

California equals the "promised land" in the "overflowing of milk and honey."

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DIED,—On the 1st of December, 1851, after a brief illness, Dr. JAMES W. LEIPER, aged thirty-seven years.

Dr. Leiper was a member of the Northern Medical Association of Philadelphia, and by this afflicting dispensation the Society have lost an amiable and valued associate, and the community an able physician and exemplary citizen.

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REPORT OF A JOINT COMMITTEE OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY AND THE PHILADELPHIA COLLEGE OF PHARMACY RELATIVE TO PHYSICIANS' PRESCRIPTIONS.

(*Published by order of the Board of Trustees of the Philada. Coll. of Pharm.*)

The joint Committees of the Philadelphia County Medical Society, and of the Philadelphia College of Pharmacy, appointed for the purpose of considering the means best adapted to prevent the occurrence of mistakes in the compounding of the prescriptions of Physicians by Apothe-

caries, beg leave to report that they have given to the subject all the attention that its importance demands, and present the following hints as the results of their joint deliberations. They have taken the liberty of adding, also, a few general hints on the relations that should exist between physicians and pharmaceutists.

A. *In Respect to Physicians.*

1. Physicians should write their prescriptions carefully and legibly, making use of good paper, and, whenever possible, of pen and ink. When obliged to write with a pencil, they should take the precaution to fold the prescription twice, so as to prevent its being defaced.

2. The nomenclature of the United States Pharmacopœia is becoming annually more in favor with pharmaceutists; a statement attested by the fact that 1500 copies of the book of Latin Labels for shop furniture, published by the Philadelphia College of Pharmacy, have been disposed of within three years. Physicians are also becoming more alive to the merits of our national Codex, and they are respectfully urged to familarize themselves with its nomenclature, and to adhere to it strictly in their prescriptions.

3. The numerous treatises on Materia Medica, Pharmacy, and the Practice of Medicine, of English origin, that are reprinted in this country, notwithstanding they are generally interlarded with the formulæ of our own Pharmacopœia, tend, nevertheless, very much to confuse the physician and apothecary, in the use and exact meaning of terms in prescriptions. To obviate the difficulties thus occasioned, the physician should, when he prescribes a medicine, which is not officinal, nor in common use, state on his prescription, either in a note at the bottom, or within parentheses, following the article, the authority or work from whence it is derived, as "Griffith's Formulary"—"Ellis' Formulary"—"Braithwaite's Retrospect," etc.

4. Physicians would lessen the risk of errors in their prescriptions, and increase the chances of their detection should they be made, by, observing the following hints.

1st. Write the name of the patient at the top of the prescription unless a good reason prevents this being done; in which case, it should be expressed as for Mr. G—, Mrs. R—, or Mrs. S.'s child, or for Master T—, so as to convey to the apothecary some idea of the age of the patient.

2d. The date and name of the physician, or his initials, should always be appended, and, whenever practical, the dose and mode of administering the medicine directed.

3d. When an unusually large dose of an active medicine is prescribed, as opium, morphia, elaterium, strychnia, etc., let such names be put in *italics*, and the quantity or quantities repeated in writing enclosed within a parenthesis; thus:—℞ Morphiæ Sulphatis grs. vj. (six grains.) Div. in chart. vj.

4th. When an active substance is to be used externally, it should be so stated on the prescription; thus, "For external application"—"To be applied to the part as directed," etc.

5th. The quantities of each article should be placed in a line with the name, and not below it, and in using the Roman numerals, the i's should be dotted correctly.

6th. The occasional practise of writing the directions intended for the patient in *latin*, and especially in abbreviated latin, is uncalled for, and attended with some risk; it is far safer to write them in English, and without abbreviation or the use of figures, unless these are well and distinctly formed.

### B. *In Respect to the Apothecary.*

1st. The apothecary should hesitate to dispense a prescription, the handwriting of which is so imperfect as to render the writer's meaning doubtful—especially if it involves agents of a poisonous or irritating character—unless he is able, from collateral circumstances, to satisfy himself of the intent of the prescriber. In such a case, he should delay the delivery of the medicine to the patient until he can see the physician, and in doing so he should avoid committing the latter by agreeing to send the medicine when it is ready.

2d. The apothecary is justified in the same means of delay, if he, after deliberate consideration, believes that the physician has inadvertently made a mistake in the quantity or dose of the article or articles prescribed; always keeping in view the physician's reputation as well as his own. Every respectful application, in such cases, to a physician, should be met in good faith and with kind feeling, even though no error should prove to exist.

3d. In his demeanor and language the apothecary should cautiously avoid compromising the physician, unless it be unavoidable, in which case honesty is the best policy, and the patient or his messenger should be told that it will be necessary to have an interview with the physician previously to compounding his prescription.

4th. The apothecary is not justifiable in making inquiries relative to the patient or his disease, or remarks relative to the character or pro-

perties of the medicines prescribed, that are uncalled for, or likely to convey a wrong impression, through an ignorant messenger, to the patient, excepting it be done in a case where he has doubts in regard to the prescription, and wishes to satisfy himself, and here he should act with great discreetness.

5th. When an apothecary is asked his opinion of a physician's prescription in a manner that indicates want of faith in the prescriber, he should waive the question, unless by a direct answer he should be able to restore that confidence. When asked the nature of the ingredients, he should be guided in his answer by circumstances, avoiding to give the desired information, when he believes it would be contrary to the wish of the physician, or attended with injurious consequences. In other cases he should use his own judgment.

6th. Physicians being often unacquainted with practical pharmacy, pay little attention to the order in which the several articles entering into a prescription are arranged, with the view to facilitate the operations of dispensing. It hence becomes the first duty of the apothecary carefully to read the prescription and fix the proper order in his mind. He should, at the same time, acquire the habit of considering the quantities ordered in relation to the usual doses, and also, the general bearing of the prescription; and a constant resort to this practice, based on due knowledge, must inevitably detect mistakes, if any have been made.

7th. Apothecaries should accustom their assistants to study prescriptions in this light, and to acquire such a knowledge of the doses and therapeutical uses of medicines as shall serve to guide them in avoiding errors.

8th. The apothecary, when engaged in dispensing a prescription, should, as far as possible, avoid mental preoccupation, and give his attention fully to his task. He should acquire the habit of *always* examining the label of the bottle before using its contents, and he should satisfy himself that he has read the prescribed quantity correctly, by referring to the prescription anew before weighing out each article. It is also a useful precaution to have bottles containing mineral or vegetable poisons distinguished by some prominent mark.

9th. As the conscientious discharge of his duty should be the aim of every apothecary, seeing that on his correct action depends, in no slight degree, the usefulness of the physician, no pains should be spared to secure the efficiency of the medicines dispensed, whether they be drugs or preparations. The latter should always be prepared of full strength, and according to the formulæ recognised by the United States Pharmacopœia, unless when otherwise specially ordered.

10th. The apothecary should always label and number correctly all medicine dispensed by him on the prescription of a physician; he should also, invariably, transcribe on the label, in a plain legible handwriting, the name of the patient, the date of the prescription, the directions intended for the patient, and the name or the initials of the prescriber.

11th. The original prescription should always be retained by the apothecary, whose warrantee it is, in case of error on the part of the prescriber. When a copy is requested, if, as in many instances, no objection can be urged, it should be a *fac-simile* in language and symbols, and not a translation.

12th. In no instance is an apothecary justifiable in leaving his business in charge of boys, or incompetent assistants—or in allowing such to compound prescriptions, excepting under his immediate and careful supervision.

13th. In justice to his sense of the proper limits of his vocation to the medical profession, and to his customers, the apothecary should abstain from prescribing for diseases, excepting in those emergencies, which occasionally occur, demanding immediate action, or, in those every day unimportant cases, where to refuse council would be construed as a confession of ignorance, calculated to injure the reputation of the apothecary, and would be attended with no advantage to either physician or patient.

14th. The sale of quack or secret medicines, properly so-called, constitutes a considerable item in the business of some apothecaries. Many of the people are favorably impressed towards that class of medicines, and naturally go to their apothecaries for them. It is this which has caused many apothecaries to keep certain of these nostrums, who are ready and willing to relinquish the traffic in them, but for the offence that a refusal to supply them to their customers, would create. At present, all that the best disposed apothecary can be expected to do, is to refrain from the manufacture himself, of quack and secret medicines; to abstain from recommending them, either verbally or by exhibiting show-bills, announcing them for sale, in his shop or windows; and to discourage their use, when appealed to.

15th. Having in view the welfare of the community and the advancement of pharmaceutic science and interest, it is all important that the offices of prescribing and compounding medicines should be kept distinct, in this city and surrounding districts. All connection with, or moneyed interest in apothecary stores on the part of physicians, should, therefore, be discountenanced. With respect to the pecuniary understanding said to exist in some instances, between apothecaries and physicians, we hold, that no well disposed apothecary or physician would be

a party to such a contract, and consider the code of Ethics of the College of Pharmacy and the Constitution of the Philadelphia County Medical Society as sufficiently explicit on this subject.

16th. In reference to the patronage on the part of Physicians of particular apothecaries, we are of the opinion, as a general rule, that Graduates in Pharmacy should be encouraged in preference to others of the same date of business; and, whilst admitting the abstract right of the physician to send his prescription where he pleases, we think that justice should dictate the propriety of his encouraging the nearest apothecary deserving of his confidence and that of the patient.

D. Francis Condie,
Wm. Maybury,
G. Emerson.
} *Committee of County Medical Society.*

William Procter, Jr.,
H. C. Blair,
John H. Ecky.
} *Committee of Phila. College of Pharmacy.*

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## MEDICAL NEWS.

University of the City of New York.—The medical department of this university have lately announced some changes in their system of instruction. The winter course of lectures is to be conducted, as heretofore, by the six professors constituting the Medical Faculty. On the 15th of March, a second course of lectures begins, which is to be continued until the following October. Lectures during this summer term are to be given, in part, by the professors who lecture during the winter; but in addition, a new corps of professors has been appointed, whose lectures are to be given solely during the summer. At the head of the list of the latter is the name of Prof. Charles A. Lee, who is to lecture on medical jurisprudence. The other professors are as follows: B. W. Macready, on hygiene and toxicology; Thomas M. Markoe, pathological and microscopic anatomy; W. H. Van Buren, diseases of the genito-urinary organs; J. T. Metcalf, physical diagnosis and diseases of the chest; Dr. Bulkley is to give a course of lectures on diseases of the skin.

The faculty, in their announcement, state that this new plan has been adopted in order to enlarge the time and opportunities for medical instruction, and under the belief that students cannot be *coerced* to pursue a more extended course than that required by medical colleges

generally. The advantages of the summer course are optional with the student, but it is proposed to confer on those who avail themselves of these advantages, certificates of honor.

We have not time, nor space, to comment on the above plan at this time. We will only remark that the university has been fortunate in having been able to secure the services of Prof. Lee. We may be allowed to say this, without intending any invidious reflections on the gentlemen associated with him.—*Buffalo Med. Journal.*

VETERINARY JOURNAL.—A *veterinary journal* is issued at Boston, under the editorial charge of George H. Dodd, M. D.

PRIMARY MEDICAL SCHOOL.—At an early period after its organization, the American Medical Association recommended the establishing of Primary Medical Schools, and in accordance with this recommendation Dr. F. R. Ramsey, of Knoxville, Tenn., announces the intention of opening such a school.

Dr. Ramsey will endeavour to direct the attention of his pupils to such books as will convey most comprehensively, and in the order here mentioned, a knowledge of Anatomy, Physiology, Pathology, Materia Medica, Therapeutics, Practice of Medicine, Obstetrics, and Surgery.

Examinations, and oral explanations, with illustrations by paintings, preparations, and apparatus, will constitute very material elements in the contemplated course of instruction.

The class will be formed on the 15th day of February, 1852.

The terms for the entire course of nine months, will be fifty dollars.

Should the size of the class render it necessary, the assistance of physicians amply qualified to instruct will be obtained.

Dr. Ramsey is a gentleman of great zeal and undoubted talents, and we commend his project to the attention of southern students.—*Medical News.*

COST OF THE DOCTORATE IN PARIS.—The Union Médicale makes the following estimate of the cost of the Degree of Doctor of Medicine in Paris: The collegiate education requires 7 years, and to obtain the two baccalaureate degrees, 2 years more are necessary; then the medical studies, properly speaking, will average 6 years; making a total of 15 years. The 7 years at college cost 1000 francs per annum, making 7000 francs; the 2 baccalaureates, 320 francs; the 6 years at medical college, 1200 francs a year, or total 7200 francs. Private courses of study, 1000 francs; matriculations, examinations, and diploma fee,

1100 francs; instruments and books, 2000 francs. Making a grand total of 18,620 francs, or about $3,724.

ACTION OF WATER ON LEAD PIPES.—The attention of readers is requested to the following circular of the Committee appointed at the last meeting of the American Medical Association. It is only by a generous and hearty assistance from their professional brethren that the full benefit of these committees is to be obtained.

TO THE MEMBERS OF THE MEDICAL PROFESSION IN THE UNITED STATES.—The undersigned, a Committee of the American Medical Association to report on "the action of water on lead pipes, and the diseases which proceed from it," are desirous of obtaining from their professional brethren any information that is calculated to throw light on this important, but hitherto generally unobserved subject. They therefore take the liberty of proposing the following questions.

1st. Have you, in your practice, met with cases of lead or painter's colic produced by using water drawn through lead pipes, or contained in leaden cisterns?

2d. Have you met with cases of arthrolgy? If so, have they been attributable to this cause?

3d. Have painful neuralgic diseases been observed by you, among persons using water thus exposed to lead?

4th. Have you seen instances of lead encephalopathy?

5. Have you observed paralysis as a precursor, concomitant or sequel to either of the above forms of disease?

Answers to any or all the foregoing questions, and any facts or information as to any form of disease originating in the use of water impregnated with lead, will be very gratefully received. Accurate descriptions of all cases would be desirable, especially their early history. It will also be very important to know the length of time each individual case had been exposed to lead before the disease became manifest.

As the report must be made at the annual meeting of the Association to be held in Richmond, Va., in May next, it is desirable that all information should be forwarded to any one of the Committee previous to the first of March next.

HORATIO ADAMS, Waltham, Mass.
SAM'L L. DANA, Lowell, "
JOHN C. DALTON, " " } *Committee.*

*Waltham, December 5th*, 1852.—*Boston Med. and Surg. Journal.*

COMMITTEE ON THE RADICAL CURE OF REDUCIBLE HERNIA.—*To the Members of the Medical Profession throughout the United States:* The undersigned are a Committee of the American Medical Association, to report on "the radical cure of reducible hernia." They are desirous of obtaining from their professional brethren any information that is calculated to throw light on this important and interesting subject.

They therefore take the liberty of proposing the following questions. An answer to any or all of them, or any facts connected with the branch of surgery on which they are directed to report, would be gratefully received:

1st. Have you been in the practice of treating reducible hernia with a view to its radical cure?

2d. Have you ever performed any surgical operation for this purpose?

3d. If so, please to describe the operation, and the mode of performing it.

4th. What proportion of cases, of all in which you have operated, has been cured?

5th. Have any alarming or fatal effects, in any instance, been caused by the operation?

6th. If so, please to describe them.

As the Report must be made at the Annual Meeting of the Association, to be held in Richmond, Va., in May next, it is desirable that the answers to the above questions shonld be forwarded to any one of the Committee on or before March 1st, 1852.

GEO. HAYWARD,
J. MASON WARREN,
S. PARKMAN,
} *Committee.*

*Boston, November 26th,* 1851. *N. H. Journ. Med.*

"EPIDEMIC JAUNDICE" has been for three weeks past and is at present very prevalent in Selma, Alabama. We have in this pleasant little town, situated on the Alabama river 300 miles above Mobile, a population of about fifteen hundred inhabitants, white and black, young and old, (a New England village,) and we are able to number *fifteen regular practitioners of medicine!*

GEORGE ORD, Esq., has been chosen President of the Academy of Natural Sciences of Philadelphia, to succeed the late Dr. S. G. Morton.

DEATH OF DR. R. L. HOOPER.—It is with much regret that we have to record the death of Dr. Robert Little Hooper, who died on Friday

the 7th inst., from concussion of the brain, consequent upon being thrown from his carriage, the horses having taken fright. Mr. Hooper commenced general practice about twenty-seven years ago, in the London road, and for many years had one of the most lucrative and extensive practices on the Surrey side of the water. He was for a long period assistant-surgeon and surgeon to the Queen's Prison; surgeon to the parish of St. George the Martyr, Southwark, to the National Guardian Institution, Bedford row, and to the Yorkshire School. Mr. Hooper, some time last year, took his degree of M. D. at St. Andrew's, or at Aberdeen, and, we believe, had retired from the more laborious duties of his profession, having lately taken an active partner. Dr. Hooper was well known to the Fellows of the Medical Society of London, at which he was a frequent attendant, and had filled several posts of honor in connexion with it. Dr. Hooper, for many years past, had been an active medical reformer, was one of the Council of the British Medical Association, and belonged to the Committee of Poor law Officers. He was an unflinching advocate of the rights of the profession, and indefatigable in his efforts to redress its wrongs. He will be deeply lamented by his bereaved family, and by a numerous circle of professional friends and patients, to whom he was endeared by kindness, urbanity, and integrity.—*Lancet.*

Testimonial to Dr. Lever.—A very pleasing tribute of respect and friendship, as well as acknowledgment of professional skill, has just been received by the family of J. C. W. Lever, Esq., M. D., (one of the Physicians of Guy's Hospital,) from a number of Ladies, being patients of his. It consists of a marble bust of the doctor, executed in the first style of the art, by Baily, R. A. The presentation of the bust was made, on behalf of the subscribers, by their treasurer, Mr. Joshua W. Butterworth.—*Ib.*

Deaths from Chloroform.—The Medical Gazette of Strasbourg furnishes the particulars of a case in which a lady suddenly died during the extraction of a tooth under the influence of chloroform. Another death occurred last July, in London, during an operation for the removal of the testis under the influence of this agent.

A female, thirty-seven years of age, named Elizabeth Hollis, the wife of a laborer in Chipping Norton, England, died lately from the effects of chloroform, administered prior to an operation by Mr. John Farwell, surgeon of that place. At the inquest it appeared that the deceased had long suffered severely from a cancer of the uterus,

and that an operation of some kind, nature not stated, being contemplated, chloroform was given, with a fatal result. The mode of giving the anæsthetic was not mentioned at the inquest, or, at all events, is not stated in the newspaper report, which is very meagre. The jury were perfectly satisfied that the chloroform was necessarily used, and properly and judiciously applied under the circumstances, and returned a verdict accordingly. Mr. Farwell should furnish the profession, for their satisfaction, with all the circumstances of the case, the symptoms and progress of the disease, the nature of the operation he proposed, the mode in which the anæsthetic was given, the fatal symptoms it produced, and the treatment adopted to combat them. We recommend Mr. Stanley's lecture, recently published in this journal, to his consideration, and that of all surgeons. It is eminently practical.—*Medical Times.*

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# RECORD OF MEDICAL SCIENCE.

## PATHOLOGY AND PRACTICE OF MEDICINE.

*Case of Colica Pictonum, from the medical employment of Acetate of Lead. With remarks.* By L. S. Joynes, M. D., of Accomack.—The following case is communicated, with the hope that it may prove a useful caution to some of the younger members of the profession, who may be inclined, from over confidence in the assurances of many of our standard authors, to make too free a use of the potent drug above mentioned. It cannot be doubted that young practitioners in general are too prone to adopt *heroic* methods of practice, and to esteem boldness and decision the chief qualities of a successful physician. Of all the rich fruits which experience brings with it, not the least valuable, certainly, is *caution* in the employment of active remedial agents—all of which, without exception, are potent for evil as well as for good.

It has often appeared to me, that one of the most valuable contributions that could be made to the science of medicine, would be a faithful record of the *real experience* of the profession in the use of the class of remedies just referred to—setting forth the deleterious effects which may be caused by antimony, opium, mercury, lead, &c., as prominently as the good they are capable of accomplishing. Such a record would furnish the most useful lesson of caution in practice that could be given. A desire to contribute to this useful kind of information has influenced me in furnishing the following case for publication—in regard to which, I must admit that the length of time which has elapsed since its occurrence renders my history of it less complete than is desirable, inasmuch as I

made no record of it at the time, and am compelled to rely chiefly on memory for the details.

On the 15th of October, 1843, Mr. J. J. B., merchant, aged 25, consulted me on account of a chronic diarrhœa, which had troubled him from time to time for several years, and which had always been obstinate and intractable. He had been treated by different physicians, who had prescribed a great variety of remedies, nearly all of which seemed of little efficacy. After listening to the details of his case, I became satisfied that acetate of lead and opium would prove the most efficient remedy; and as none of his previous medical advisers had prescribed this combination, I determined to give it a trial. I believe I had never before prescribed the acetate of lead, but I relied, very naturally, on the assurances, everywhere to be met with in the books, that the use of the drug is free from risk, provided a perfectly pure article be employed, and acetic acid in some form be prescribed in conjunction with it.

I accordingly selected the most perfect crystals of the acetate; added more than enough of distilled vinegar to neutralize any of the carbonate which might be present as an impurity; then adding the opium, I made the mass into pills. I also directed the patient, immediately after taking each pill, to swallow a teaspoonful of vinegar. The precise formula which I employed I am unable now to state, but my recollection is distinct, that the entire quantity taken was 30 grains, in the course of about four days. The medicine proved most efficient in the relief of the diarrhœa, the discharges being arrested more promptly than by any other remedy, and without any *immediate* ill effects. The patient and myself were both congratulating ourselves upon the favorable result, when one day, perhaps a week after he discontinued the pills, he complained to me of a pain in the epigastrium, radiating to the spine. As the patient was then apparently regaining his health, and in good spirits, I paid little attention to this complaint, supposing it to be a momentary gastralgic affection, occasioned by some imprudence in diet. Not long after, I learned that he was laboring under a severe attack of colic, and I was called on by Dr. Young of this place, his ordinary medical attendant, who came on purpose to ascertain the composition of the pills which the patient had been taking. The peculiar character of the colic with which he was at that time suffering, so strongly resembled that of colica pictonum, that Dr. Young had been led to enquire of him whether he had taken any medicine recently for diarrhœa. There could indeed be little doubt, from the account given me of the symptoms, and the subsequent progress of the case, that the attack was one of saturnine colic, of more than ordinary severity.

This attack commenced on the 3d of November, about a fortnight after the patient had taken the last pill, and continued with slight remissions for eight days, before any decided relief was obtained. The treatment consisted principally of free and oft-repeated doses of calomel and opium, purgatives by the mouth, enemata, and blistering. A very large quantity both of opium and calomel was administered, and every other means employed which an experienced physician could devise, but there

was no permanent relief to pain, and no decided action of the bowels, until the eighth day, when the mouth became affected by the mercury. The patient then slowly recovered, but he remained for some time in a very reduced and debilitated condition. It would have been some compensation for all this suffering, if he had been cured of his diarrhœa; but no such fortunate result ensued. The attacks continue to recur from time to time, and are as obstinate as ever.

If any should be disposed to doubt whether the above was truly a case of lead colic, in view of the long interval which elapsed between the employment of the remedy and the manifestation of the symptoms, I would remark that this is entirely in accordance with the oft-observed facts in regard to the poisonous operation of lead—*slowness* of action being the general rule.

This is the only case I have ever met with in my own practice, of any serious result following the exhibition of the acetate of lead; indeed, I rarely trifle with the drug now-a-days. (*"Chat échaudé craint l'eau froide."*) But I know of three other cases of the same kind, which have occurred in this neighborhood. It is fair to add, however, that in at least two of them the remedy was freely used. There is no lack of recorded instances of the sort; but so far as I am informed, cases are very rare, in which colic is produced by so small a quantity of the acetate as was administered in the case which I have just related. One is mentioned by Dr. Burton, in a paper of which extracts are given in Braithwaite's Retrospect, No. 2, p. 66; here the patient took fifteen grains in five days, and experienced severe colic. And Prof. Trousseau, in his work on Therapeutics, quotes a case in which the patient took six grains of the neutral acetate of lead daily for three successive days; the fourth day, a most violent saturnine colic supervened, with jaundice, constipation, retraction of the belly, etc., which only yielded to the "treatment of La Charité," energetically employed. The most remarkable case of all is given by Devergie, in his *Méd. Légale:*—A student of medicine consulted Professor Fouquier, who prescribed for him some pills containing each one grain of acetate of lead, of which he was directed to take one every day. The *first pill* produced slight colic, the second acted more severely, and the third occasioned such violent symptoms that some mistake of the apothecary was suspected. The pills were analysed by Devergie, but were found to contain nothing but acetate of lead.

It may be urged, and with truth, that such cases are exceptional, and that they may be explained by the existence of idiosyncrasies in the subjects of them such as are known to exist with respect to mercury, opium, and other remedies. But allowing this to be true, it must also be admitted that a prudent physician is bound to regard such idiosyncrasies in his practice. The knowledge of their occasional existence should be a warning against the use of hazardous remedies, except under circumstances imperatively calling for their employment.

A circumstance which has doubtless contributed in no small degree to extend the employment of the acetate of lead as a medicine, and to set the minds of physicians at rest in regard to any risk attending it, is the

opinion so confidently expressed by Dr. A. T. Thomson, that *the carbonate is the only poisonous preparation of lead*, and that the acetate can only become so in consequence of its decomposition by the free carbonic acid extricated in the alimentary canal. Hence his precept to direct a draught of vinegar to be taken with each dose of the acetate, in order to prevent such decomposition, as well as (I presume) to re-saturate with acetic acid any portion of the carbonate with which the crystals of the acetate may be contaminated.

It requires but little examination of the facts to convince us that this idea is entirely opposed to the well known general laws of the action of mineral poisons. *Ceteris paribus*, these poisons are active in the direct ratio of their solubility; and on this general fact is based the theory of antidotes. We give antidotes with the view of converting a soluble preparation of a metal into an insoluble one. Would it not be a singular exception to a general rule, if the acetate, one of the most soluble forms of lead, should be entirely innocuous, and the carbonate, one of the least soluble, alone endowed with poisonous properties? It is true, that small doses of the carbonate would be rendered soluble by the acids of the gastric juice, being converted by them into the chloride and the acetate, (assuming, in accordance with the general opinion of chemists, that the hydrochloric or acetic acid, or both, exist in the secretion of the stomach.) What then will become of the acetate, when swallowed? If it meets with acetic acid in the stomach, it will remain acetate still; if with hydrochloric acid, it will be converted, like the carbonate, into the chloride of lead. The two substances, therefore, when they begin to act on the system, and are absorbed into the blood, will be in precisely the same chemical state. Considering the acid nature of the gastric secretion, and its probable action on all chemical compounds capable of being affected by its ingredients, is not Dr. Thomson's idea of the conversion of acetate of lead into carbonate, by the free carbonic acid in the alimentary canal, evidently a fallacious one? And is not, therefore, his employment of distilled vinegar in conjunction with the acetate, an illusory protection against the dangers of lead poisoning?

But without further argument on the chemistry of the question, it is sufficient to state that Dr. Thomson's theory is in opposition to the concurrent testimony of the best toxicological authorities of the day, among whom I may cite Orfila, Apjohn, Taylor, Christison, and Devergie. The latter writer, whose authority is second to none, distinctly states that the poisonous activity of the compounds of lead is in direct proportion to their solubility. Christison and Taylor both (conclusively, it seems to me) combat the opinion of Thomson. I will quote a few words from the last mentioned of those authors, bearing directly upon the practical point at issue: "So far as observations on man have yet extended, the carbonate has no more action than the common acetate. Dr. C. G. Mitscherlich has lately proved that the acetate is a poisonous salt, and that when mixed with acetic acid *it is more energetic than when given in the neutral state*. This fact clearly shows that the poisonous effects cannot solely depend on the assumed conversion of the salt to the state of carbonate." (Taylor's Med. Jurisp., 2d ed., p. 169.)

This result of Mitscherlich's researches is precisely what a consideration of the general laws of toxicology would lead us to expect. Let physicians, therefore, take care how they rely on vinegar, or dilute acetic acid, as a *safeguard* against the poisonous effects of the acetate of lead.

*Stethoscope and Virginia Med. Gaz.*

## SURGERY.

*Report of a Successful Case of Trephining for Compression of the brain.* By J. W. H. TRUGIEN, M.D., of Portsmouth, Va.—The report of the following case has been delayed until its result could be clearly established. It has ever been too much the custom with physicians to be hasty in the report of their cases—and many which have been published in the journals as successful, though in truth they were so, as far as their immediate result was concerned, have ultimately proved otherwise; and that, too, in some instances, it is to be feared, before the pages which contained the record of them had been given to the public. Such a course of proceeding is unfair, and detrimental to the true interests of our science, even though not so designed. The writer hopes, in the narration of his case, to avoid the same error. The subject of this report has so far recovered as to have resumed the active duties of life, being now engaged as a watchman at the railroad depot at this place. His general health is very good—even better, according to his own statement, than before the reception of the injury. It is but fair to state, however, that the wound of the operation is not yet entirely healed, a slight purulent discharge continuing, owing to exfoliation of the outer table of the skull. Several pieces have been removed at different times, and a small portion at the dressing of yesterday. Mental integrity has been completely restored, and the special senses (with the exception of that of sight) are unimpaired. Vision is not as good in the left eye as in the right. In the relation of the case I shall merely transcribe my notes made from day to day during its course.

June 25th, 1851.—Called to see J—— T——; occupation, laborer; aged 25; married. Stabbed in the head, a few minutes previously, with a knife; particular kind of knife not ascertained; situation of wound above left frontal eminence; sitting up; pale from loss of blood; no fracture or other lesion of bone discovered. Injury considered, and treated as a simple penetrating wound of the scalp.

26th.—Met patient on the street, feeling very comfortable.

27th.—Called to have wound dressed. Appearance good; union by first intention; feels comfortable; some restlessness, however, the preceding night; bowels unmoved since infliction of injury. ℞ Magnesiæ sulph. ℥j.

29th.—Again called to have wound dressed. Cicatrization complete, some uneasiness about the head, attributed (at the time) to excessive heat of weather and the thick growth of hair which covered the head, and which the patient refused to have shaved. It is proper to remark, in this place, that a medical friend present at the time thought he per-

ceived some tumefaction below the wound and above the left eye. And as it will have some bearing upon the subsequent history of the case, mention must here be made of what was afterwards learned from the patient's wife, viz: that on his return home this day, he for the first time manifested some mental disturbance. On entering the house he remarked to her, that he should have to go out again to have his hair cut; and "I want, and I want," he slowly and hesitatingly continued to repeat, without the ability of telling what it was in reality he wanted. Getting worse and worse, he did not go out that day. From this date until July 2d, the history of the case is imperfect, as during this time he was under the treatment of another physician.

July 2d.—Saw patient again; found him in a half comatose condition; stupidity of expression; tumefaction below the wound; skin pitting on pressure; great disposition to sink back into the somnolent state after being aroused; pupils dilated; respiration slow, but unattended with stertor; great disposition to gape and yawn; pulse 60, full, slow, and laboring; bowels constipated, and urinary secretion deficient. The attending physician had very properly cupped him back of the neck, purged him, applied counter-irritants to the lower extremities, and placed him upon a mercurial course. No opening had been made into the swelling, from the impression that it was of an œdematous character. Hair had not been removed; recommended its removal.

July 7th.—Again a gap occurs in the history of the case until the above date, the patient not having been under the care of the writer during this time. Hair had been cut off, and for the first time another wound was discovered about an inch and a half above the first, and as nearly as possible over the coronal suture; surrounding tumefaction much reduced by the discharge of pus which was issuing from the wound. The introduction of the probe discovered the bone to be injured, the knife having penetrated it—to what distance, or whether it had passed through the diploe and internal table, could not then be ascertained.

*Symptoms.*—Great somnolence; stupid, vacant expression of countenance on being roused; much gaping and yawning; pupils dilated; some ptosis of left eye-lid; free discharge of pus; puffiness of scalp gone; no pain or uneasiness of head; respiration slow; no stertor; tongue protruded without difficulty—coated with a yellowish fur; pulse 60, full, slow, laboring; bowels constipated, and urinary secretion deficient; intellect much impaired; memory prominently implicated; patient unable to recall the names of even his wife and children; unable to tell whether he had eaten or drunk anything that day. A watch being showed him, he tells the hour, but not the minutes before or after a particular hour. Ordered one of the following pills every half hour, until free purging ensued:—℞. Ol. tiglii gttæ ij—micæ panis q. suf. Ft. Mass. Div. in pil. No. iv. Sinapisms to the back of the neck and lower extremities; egress of pus to be promoted by warm applications to the wound; light, unirritating diet.

8th. Symptoms same as yesterday; no action from Croton oil. Ordered following enema: ℞. Ol. tereb. ol. ricin. aa. ℥j.

9th. No improvement. Enema did not act, though thrice repeated. ℞. Hyd. chl. mit. gr. xx., jalapæ pulv. gr. xxx., and repeat enemata.

10th. Much the same. Bowels twice moved.

11th. More rational to-day.

12th. Better to-day; understands questions, and replies with more readiness. Conversed with his wife, noticed his children, and recognized different individuals. Free discharge of pus from the wound. Pupils dilated, pulse 48, full and strong. Urine voluntarily discharged. Ate some light, nutritious food.

13th. Passed a bad night. Early in the evening restless and uneasy; tossing the head about, and then sinking back into a state of somnolency, amounting to almost complete insensibility—in which condition he was found at the visit of this morning. Utterly unconscious of what is going on around. Pupils dilated, and not responding to the action of the light; pulse full, slow, apoplectic, 44 in the minute. Inability to protrude the tongue. Wound discharging pus freely.

14th. No improvement. Operation of trephining determined upon, after a fair statement of its dangers to the family.

Four o'clock, P. M. Patient lies as if in *articulo mortis*. In the presence of Drs. Thos. Williamson, surgeon U. S. N., J. N. Schoolfield, Young, Maupin and Jas. Williamson of this place, Drs. Moore, Upshur and Wright of Norfolk city, and Dr. J. W. Garlick of King and Queen, the operation was performed, as follows: The hair having been shaved off to the extent of several inches around the wound, a crucial incision two inches in extent was made over it, and carried down to the bone. The hemorrhage from these incisions was inconsiderable. The crown of the trephine was then applied, and with it, for a guide, the pericranium was divided, by means of a scalpel, all around, so as to permit the teeth of the instrument to come in contact with the bone directly; the centre pin adjusted and the operation of boring commenced and gradually and carefully continued until the bone was completely drilled through and the button removed—whereupon a gush of purulent matter instantaneously issued from an opening in the dura mater, and continued to flow to the extent of an ounce and a half—the patient immediately emerging from his state of stupor and conversing with the by-standers. The pulse, which at the commencement of the operation was 44, at its close had mounted up to 80. Wound dressed with adhesive strips and compress, one end being left loose for the discharge of pus. Circular bandage also used to confine a compress over the middle temporal artery, which had been divided and was bleeding. My friend, Dr. J. Williamson, very kindly consented to remain with him during the night, which was passed quietly.

15th. Doing well; perfectly rational; pulse 70; has taken some light nourishment. Wound looking well; lightly dressed.

16th.—Quite comfortable; pulse 60; pus continues to flow from opening in dura mater. A probe introduced into this opening was passed down to the depth of two inches and a half by measurement, in an oblique direction, towards the anterior corner of the left lateral ventricle.

17th. Slept quietly last night; pulse 60; wound looking well.

18th. Removed ʒiss. of pus from abscess of the brain, by means of a small glass syringe, the nozzle of which was introduced into the opening through dura mater. Bowels confined. Ordered ol. ricini ʒss.

19th. Removed half an ounce of pus from abscess.

20th. Doing well. Found patient sitting up smoking a pipe. From this date the patient continued to improve until the present time, when his condition is as described in the remarks prefatory to the case.

REMARKS.—Injuries of the head have ever been subjects of greatest interest to the surgeon, as well from their frequent occurrence as from the obscure and anomalous symptoms occasioned by them. Owing to these latter circumstances, their diagnosis is complicated; prognosis rendered extremely fallible, and treatment undecided, and too often inefficient, if not actually hurtful. Nor is it so much to be wondered at, when we consider how obscure and unsettled are the phenomena of the brain and nervous system, even in their normal action. But when disturbed, as is most generally the case, by such injuries, they are rendered doubly obscure and unintelligible. Concussion and compression of the brain have ever engaged the most serious and earnest attention of the surgeon in their investigation; and although when well marked, there can be but little difficulty in diagnosing the one from the other, there are cases which puzzle the most discriminating. The two lesions may insensibly run into each other—what was concussion in the first instance becoming compression afterwards. Or there may be such a combination of symptoms that we are in doubt whether to call it a case of concussion or one of compression—the two morbid conditions seeming actually to co-exist. In the foregoing case the symptoms, though at first ill defined and obscure, were obviously due to compression of the brain. But what was the compressing force, was not equally clear. A portion of the internal table of the skull might have been detached by the force of the blow, and caused pressure upon the cranial mass. Or the same blow might have ruptured one or more of the delicate meningeal arteriolæ, and given rise to pressure from hemorrhage. Again—inflammation may have been lighted up in the meninges of the brain, and caused pressure, by the effusion of pus upon the cerebrum. In fact, some one or all of these reasons were adduced in explanation of the symptoms, by various medical gentlemen who saw the patient. However plausible, none of these explanations were satisfactory to the writer, who, early in the case, and before the second wound was discovered, referred them to penetration of the bony parietes of the skull, as well as the membranes, by which inflammation and subsequent suppuration had been occasioned. Hence, the gradual supervention of the symptoms. This opinion, which he is happy to state was concurred in by one or two of his confreres, received an ample confirmation by the result of the operation; for the button of bone removed by the trephine showed a cuneiform perforation of the third of an inch in length, as also the dura mater to the same extent. On reversing the button also, a spiculum of bone attached to its lower angle was discovered.

With regard to the treatment of this case, candor compels the admission that it might have been more actively antiphlogistic. But whether this would have at all conduced to a more favorable result, is very questionable. My own conviction is that it would not, and that the freest general depletion, the only part of the antiphlogistic course omitted, would have been unavailing in obviating the necessity of an operation. Still, I am free to admit that under the same circumstances, I would most copiously deplete from the general circulation, in order to give the patient every chance of recovering, without exposing him to the risk of such an operation, which though successful in instances innumerable, is always attended with much danger to the patient, and, in a multitude of cases, fatal, either from the supervention of acute inflammation of the brain and its meninges, or the more remote consequences of hernia cerebri. No case in medicine or surgery, however simple, can fail, if closely studied, to afford useful and instructive practical lessons. The study of this case has been replete with such to the writer. It adds another to the many recorded instances of severe injury to the brain, from which recovery has taken place under seemingly the most unfavorable circumstances, and encourages us never to despair of affording relief even at the last extremity. A volume might be filled with cases illustrative of what has been said. The recorded experience of army surgeons upon this point is indeed almost incredible, but for the undoubted veracity of the writers. The work of Mr. Guthrie on "Injuries of the Head," is full of cases of this kind. The conclusions of this surgeon, after the enumeration of many cases in support thereof, are that "injuries of apparently equal extent are more dangerous on the *forehead* than on the side or middle of the head, and much less so on the back part than on the side." He further remarks: "I have never seen a person live with a foreign body lodged in the *anterior* lobe of the brain, although I have seen several recover with a loss of a portion of the brain at this point." The medical journals of the day have contained the records of recovery from the most extensive and terrible injuries of the head. Dr. Harlow's case of "recovery from the passage of an iron bar through the head," (*vide* American Journal of Medical Science, July, 1850,) must be familiar to every professional reader. Physiological experiments too, as those of Flourens, Majendie, Mayo and others, clearly demonstrate that the most severe injuries may be inflicted upon the brain with comparative impunity, and that it may be even sliced away to a very considerable extent, without destroying the animal.

Without protracting these remarks, I would, in conclusion, call attention to two practical points connected with the case. Mention has been made in the detail of the case of the use of the syringe in evacuating the abscess of the brain of the pus. Mere position would not have accomplished this, as it was fairly tried. Suction, by the instrument, however, was entirely successful in the removal of every particle of pus. The writer remembers having heard this plan recommended by Dr. William Gibson, of the University of Pennsylvania, and can bear testimony to its efficiency.—*Stethoscope and Virginia Med. Gaz.*

THE

# MEDICAL EXAMINER,

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## ORIGINAL COMMUNICATIONS.

*Cases of Synovial Articular Inflammation of the Knee, treated successfully with Urate of Ammonia.** By W. E. HORNER, M. D., Prof. of Anatomy in the University of Pennsylvania, Senior Surgeon of the St. Joseph's Hospital, etc.

The liniment of ammonia is so well known in the treatment of chronic articular affections, that its character may be considered as settled; but my attention has been only lately called to the still higher powers of urate of ammonia, an article which, though sufficiently offensive to the olfactories, has a strong compensating quality in the efficiency of its action. My first observation in regard to it was the result of having accidentally been

* This paper was originally read before the Academy of Natural Sciences, on Tuesday December 9th, 1851, though now published by preference in a Medical Journal.

called to a poor woman who was in a state of unremitted and excruciating suffering, day and night, but especially during the latter period, from a chronic inflammation of the knee joint, attended with considerable swelling and tenderness, and some degree of redness. I made to it the ordinary applications of cold fomentations, and evaporating lotions, enjoined rest, attended to her diet and the state of her bowels, and gave opiates at night in the shape of Dover's powder. After ten or twelve days of attendance, in which no progress was made to a cure, I was much gratified on a visit to find that the pain had ceased suddenly, and that the preceding night had been spent in great ease. The strong expression of satisfaction on my part, led to a communication from her, with many apologies for herself, that, finding the disease so little abated, she had been tempted to try the remedy of a simple friend, who had been remarkably improved by it in a similar attack. This remedy was a poultice made of human urine, thickened with potter's clay, and put on as warm as one could bear it; and to be repeated when it got dry. She declared to me that this rather indelicate application had relieved her of all pain in a few hours. The fact of relief was incontestible; the question was in regard to the remedial agency of the article employed, and I therefore determined to make some experiments on the value of ammonia in combination with fine argillacious earth.

Having a similar case shortly afterwards, in the St. Joseph's Hospital, I tried in it a solution of muriate of ammonia formed into a poultice. No very distinct or satisfactory result followed, and it was discontinued. Having the idea still in my mind, and wishing to be satisfied about it, but reluctant to employ the article resorted to by the poor woman, I determined to find my urate of ammonia in some other form of an easy kind, and for that reason adopted the guano, which has so large a proportion of phosphate of lime, urea and of urate of ammonia in it. A female patient, aged 34 years, Mrs. C——, from Tamaqua in this State, who had for more than a year labored under inflammation of the right knee, was put under my charge at the St. Joseph's Hospital, October 8th, 1851. She had been well attended to by Dr. Scherner, who had conducted her through the most acute period of her complaint. The joint had suppurated,

and she came to town with a small fistulous orifice on the inner side of the knee, through which a probe could be easily passed between the tibia and os femoris. From this there came daily a spoonful or more of matter, when a plug was withdrawn from the orifice. She still suffered great pain at night, the part was tender, and was in continual uneasiness, and she had some slight fever in the afternoon. Here was exactly the case to try the efficacy of urate of ammonia, as naturally formed in animals. I accordingly obtained some guano, and had it made into a hot poultice with clay. The joint was kept enveloped in the poultice with frequent changes, for nearly the remainder of the month, at the end of which time a very marked improvement had taken place in the amount of pain, and also in the degree of swelling; and the purulent discharge had almost ceased.

The application produced a very copious vesication of the knee, and it had to be weakened to reduce the caustic qualities. Having conducted this treatment as far as seemed necessary, the skin was permitted to heal. Some little pain recurring afterwards, she was blistered for it; that getting well, the emplastrum calefaciens was applied, and the leg was also kept supported by an extending band on the ankle, and a counter-extending one on the thigh, their action being sustained by a splint on the outside of the limb. At the end of six weeks, November 25th, she has left the hospital without pain or uneasiness in the knee. The joint is in a state of false anchylosis, and straight. I have covered the knee with emplastrum adhesivum, and secured it in that position with strong paste board splints, moulded to the knee; and have recommended her to keep it so for two or three months, until all danger of secondary suppuration be removed. Probably at the end of this time the judicious use of frictions and of Stromeyer's screw splint, may impart some flexion to the limb.

The Hospital record sheet shows the following details of dates, which may be inserted in this place:

*Oct.* 9. Poultice of guano, (*urate of ammonia*) and potter's clay, equal parts.

*Oct.* 10. Poultice has blistered. It was discontinued, and simple cerate applied.

*Oct.* 11. Patient has less pain; soreness of knee reduced, and

not so much swelling. A poultice with one-third of the urate of ammonia, and two-thirds potter's clay.

*Oct.* 13. Vesication.

*Oct.* 14. Quantity of urate reduced to one-fourth of poultice. Treatment continued pretty much in this state to near the end of the month. Vesication by Emplast. Cantharid. about this time, but omitted on record.

*Oct.* 28. She was permitted to eat as she pleased.

*Nov.* 5. Emplastrum calefaciens.

*Nov.* 12. Discontinue emplastrum calefaciens, and re-apply the urate of ammonia as on 14th October.

While this case was in progress, another occurred in a boy who had the knee joint opened by a cut of half an inch or so in length. Synovial inflammation followed, with the ordinary symptoms. Its usual acute-period was passed through, under the depletory antiphlogistic treatment, and with evaporating lotions to the part. The disposition to fall into the chronic state, attended with tumefaction was relieved by five days use of the same argillacious, uro-ammoniacal poultice.

The Ward sheet exhibits the following entries in regard to this case: Patient, Timothy Roach, aged nineteen years, admitted September 23d, a day or two after accident. Knee painful and stiff, somewhat swollen. Rest and fomentations of warm water directed on that day. Also loss of ten ounces of blood from arm.

*Sept.* 24. Local bleeding by scarified cupping. Fomentations continued.

*Oct.* 4. Warm fomentations to this date; in the mean time an evident articular effusion has occurred into the synovial membrane of the knee. A blister plaster 4 inches by 4, was then applied.

*Oct.* 6. Blister plaster 2×3 inches.

*Oct.* 7. The patient so much relieved from pain as to be permitted to leave his bed and promenade with a crutch.

*Oct.* 9. Some aching and tumefaction indicated a persistence of articular irritation. The poultice of urate of ammonia (guano) one-fourth, potter's clay three-fourths, was then applied hot, with frequent renewals to the 14th of October, at which time

all the symptoms were relieved. The patient was discharged cured on the 15th.

The above cases are reported much in outline. I shall continue, as opportunity offers, to test the value of the above remedy, and also compare its results with other remedies. It appears to me to have some special qualities, which are of a highly beneficial kind in the affections alluded to. It is so active a revulsive when applied strong, that I have no doubt of their being many cases of serous inflammation in which it may be usefully resorted to. I would here suggest a trial in puerperal peritonitis and in pleurisy. I see no objection except the odour.

The poultice of guano and clay dries very quickly, so that it is better to shield it with oiled silk or India rubber cloth. The clay I look upon as simply a vehicle, but it may also have some physiological action from its physical properties in regard to moisture.

The analysis of the best guano, by the chemist, presents the following constituents, which are mentioned here for facility of reference. The proportions will vary according to their atmospheric exposure and to the degree of adulteration in trade. As it is an expensive article for agricultural purposes, it has become common to reduce its chemical relations by the addition of common earthy substances:

Uric acid, thirty per cent.
Uric acid with ammonia.
Carbonate of ammonia.
Muriate, oxalate, and phosphate of ammonia.
Free ammonia.
Phosphate of soda.
Phosphate of lime.
Sulphate of potash and soda, and oxalate of lime.

It is the large quantity of ammonia in it which makes it so active a stimulant to vegetable growth, and so disagreeable to the smell. It, however, is not so intolerable medically, as assafetida, an article which we have but little hesitation in prescribing.

## *A Case of Curious Cutaneous Disease.* By S. Weir Mitchell, M. D., of Philadelphia.

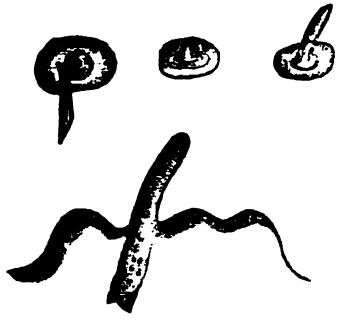
Jane ——, æt. 13. She had enjoyed good health up to a period about one year previous to the present date, when an eruption of a very peculiar character appeared upon the fore part of her neck, chin, and lips, and, somewhat later, upon the back of her neck. The eruption is but slight, twenty or thirty vesicles being constantly present, and running their course, to be succeeded by others of like nature. Their long continued presence seemed to have exerted no influence upon the little patient's general health; and save the local disfigurement and the constant itching which they occasion, the case might be passed by as one rather to be cured by time than attacked by remedies.

On the 20th of November, the child was brought by the mother to the clinic of the Jefferson Medical College, where I noticed the case in an ante-room. On this, and on several other occasions, I studied the disease with some care, and twice examined the contents of the vesicles with the aid of a microscope. When first seen, the eruption presented the following appearance: Around the lip were about a dozen of minute white vesicles, with semi-transparent apices filled with a thin serous fluid. These were also to be seen at a more advanced stage, when they began to assume an umbilicoid appearance, like the pustules of small pox, save that they still retained their white hue. In most of the papules, the central prominence now began to harden and to grow outwards; sometimes offering an irregular elevation, at others presenting the singular phenomenon of a pretty regular projection, shaped precisely like a minute finger, and growing from beneath the central elevation, or a little to one side of it. Some of these small horn-like growths stood directly out from the skin, while others hung downwards, being bent at their base. Their length varied greatly, the largest being about two and a half or three lines long.

After a few days, these prominences dried up and fell off, while the base gradually disappeared, the whole process from beginning to end occupying from a week to ten days.

I secured specimens of the eruption by seizing these projections with forceps and pulling them off. They seemed to draw out of the skin beneath which they appeared to grow, pushing before them, as a cover, the thin membrane of the vesicle. A careful section presented the appearance which I have drawn:

Fig. 1, a.



The fluid contents of the papule were a thin serum, in which the microscope discovered floating a number of yellowish globules, perfectly homogeneous and without nuclei. The peculiar prominences spoken of above, were formed of a mass of these globules, altered by drying, and changed in form by their close juxtaposition.

Fig. 2, b.

These albuminoid bodies varied so greatly in size as to render any measurements useless. They seemed to spring from the skin, and resembled greatly the globules of concrete albumen,

which are met with at times in tumors, and not unfrequently upon the skin, in the neighborhood of pimples which are drying up, etc.

Under the use of arsenic and an ointment of equal parts of mercurial, tar, and sulphur ointments, the eruption rapidly changed its nature to that of a well developed squamous affection which grew better, and indeed, seemed in process of cure when I last saw it.

Another case of a similar nature fell under the notice of my friend, Mr. Brinton, about one year ago; but, with this exception, I know of none other, and I have searched for it in vain among the English and French delineations and descriptions of cutaneous disease.

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*Extracts from a Lecture "On the present position in Europe of some of the most interesting and important points of Modern Surgery," recently delivered as an Introductory Discourse.* By THOMAS D. MÜTTER, M. D., Professor of Surgery in Jefferson Medical College, Philadelphia.

(Continued.)

*Opthalmic Surgery*, as I anticipated, from the numerous excellent and practical works, which from time to time have appeared from the teeming intellects of Lawrence, Mackenzie, Middlemore, Chelius, Elle, Vidal, Velpeau, Romig, Cullier, Roquetta, and others, I found in a most excellent condition. In truth, no department of our science appears to have been cultivated with more success, and that which, but a few years since, was "chaos and confusion dire," appears to have been touched with the wand of some mighty magician, and is now a bright and connected portraiture of nearly every disease to which the human eye is liable. I cannot, of course, attempt here a survey of the immense mass of novel as well as of useful information with which the science has been enriched by the labors of those to whom I have just referred.

*Ovariotomy.*—A distinguished philosopher, has classed man among the most cruel of animals; and certainly, were we to restrict our observations to the mere work of the surgeon, without entering

into an investigation of the motives which lead him to the performance of bloody and terrific operations, the example alone, would be sufficient to lend countenance to the assertion, repugnant as it must be to the feelings of every one possessed of the common attribute of humanity. Certain it is, however, that some of our operations may be considered as supporting, to a limited degree, the charge made against our race; and there is none in the whole domain of Surgery better calculated to elicit, even among the profession, a more profound sensation of horror, or better deserves the epithet of cruel, than one recently introduced into practice; and were we not convinced that nothing but a fervent desire to relieve a suffering mortal, could induce a surgeon to undertake its performance, we should at once look upon its author as a being destitute of either sympathy or compassion, and richly deserving the detestation of his fellow men.

The operation to which I refer, is that for the removal of *ovarian tumors*, by what is called the *great incision*. In other words, by an incision that extends in a straight line from the *cartilago-ensiformis*, to the *symphisis pubis!* It is called the *great* or *major incision*, to distinguish it from another operation for the removal of diseased ovaria, in which the opening made into the abdomen extends but a few inches, and which was suggested by William Hunter, but has attained its present reputation in consequence, especially, of the labors of Jeaffreson.

As this subject is attracting a great deal of attention both abroad and at home, it will not be inapposite to furnish you with a slight sketch of its history and present position. It would appear that in consequence of the frequent failure of pure medical means, to relieve dropsy of the ovary, several surgical operations have from time to time been performed. Thus, some have advised "puncture of the cyst, evacuation of its contents, and then injection of some stimulating fluid, for the purpose of exciting adhesive inflammation;" others attempted a cure by making a free incision into the ovary, evacuating its contents and converting the opening into a fistulous sore, (Ledran, Houston, Voisin, &c.) Others again, suggested the removal of a part of the cyst, so as to make it empty its contents into the peritoneal sac, (Blundell, &c.) *Acupuncture*, with long needles, also has been performed, but the operation usually pre-

ferred has been simple *tapping*. Indeed, with the exception of the latter, all the others have been, with great wisdom abandoned, and the acknowledged failure of this operation to afford more than temporary relief in many cases, while in others it was followed by death, induced surgeons to seek for something upon which their confidence could, with greater security, be placed. Accordingly, we find that some fifty years since, L'Aumonier, of Rouen, extirpated an enlarged ovary, under the supposition that it was dropsical. The case turned out, however, to be one of *abscess* of the organ, and the patient ultimately recovered. This was unquestionably, I believe, the first removal of a diseased ovarium, but soon after, in 1809, Dr. McDowell, of Kentucky, performed the operation in a case of real ovarian dropsy, and the patient recovered. This successful result, induced others to repeat the experiment, and since that period a large number of cases have been reported, and undoubtedly others have been performed, of which no account has been furnished. But at no period, probably, has there existed so much excitement in reference to this operation, as at the present moment, and you will find, as is ever the case, when men allow feeling or interest to obtain a mastery over their judgment, that the most disgraceful acrimony and harshness of language has been indulged in toward each other, by the advocates, as well as the opponents of the measure in question. For my own part, I have endeavored faithfully and cautiously to examine the subject, being prejudiced neither for nor against it, and must confess, from the *information now furnished to the world*, I am induced to range myself among its opponents, except in cases of *unilocular cyst, without adhesions;* and even here I deem it altogether unjustifiable, until all other means have proved nugatory, and the fatal termination of the case without it appears inevitable. When had recourse to, it becomes the bounden duty of every surgeon to state candidly its dangers, and the probability of its failure. In order that my opinion may be borne out by sufficient reasons, I beg leave to offer a list of the most prominent objections urged by different authorities to the operation, and which must present themselves at once to every one who carefully investigates the merits of the question.

The objections to the operation, are

1st, The difficulty of arriving at a just diagnosis.

2d, The danger of the operation itself.

3rd, The nature of the disease does not sanction so violent a remedy.

4th, It is contended that palliatives will often succeed in rendering a patient comfortable during a long life.

5th, An operation does not always succeed in relieving a patient radically, even when she escapes the dangers immediately consequent to its performance.

6th, The disease may terminate spontaneously.

Such are the objections urged against *ovariotomy*, by the first surgeons of Europe, and I can with perfect truth declare that there is scarcely an eminent man abroad who lends the slightest countenance to the measure.

While we hope that future observations may divest the operation of many of its dangers, and establish a more correct diagnosis in the disease for the relief of which it has been proposed, we sincerely trust that no one will heedlessly attempt so hazardous a procedure, without duly reflecting upon the immense responsibility he assumes.

*Plastic Surgery.*—You will be anxious, I doubt not, to learn the estimation in which European Surgeons, generally, hold what is called *Plastic Surgery.* This department of our science, although in reality "old enough to speak for itself," may be considered a comparatively modern invention, for certainly the beautiful and perfect results attained in our time through its agency, far surpass anything that emanated from the hands of its original advocates and inventors, not excepting even the learned Taliacotius himself. These operations were for many years considered almost as fabulous, and have excited the ridicule of the wits of every age, including Butler, Voltaire and the polished Addison; and even now, notwithstanding the positive testimony of the first authorities in their favor, are supposed by many to be bare assertions destitute of truth, and as useless as they are apochryphal. But, gentlemen, both wit and opposition have been tried in vain, and the most distinguished men in Europe unite in awarding to the measure a high and commanding position among the most useful improvements of the age. When such authorities as Graefe,

Dieffenbach, Zeis, Chelius, Delpech, Dupuytren, Velpeau, Roux, Lisfranc, Larrey, Blandin, Labat, and Jobert, on the continent, and Brodie, Lawrence, Liston, Stanley, Fergusson, and others of high authority in England, declared their conviction of its utility, *Plastic Surgery* may be considered as having fought its battles, and will soon rest under the ægis of an established operation.

*Lithontripsy.*—One of the most striking characteristics of our nature is, that which leads us to doubt the value of every project or scheme originating with another. We cannot realize at once the fact, that some one else has discovered and brought to light something of which our own faculties have never taken cognizance; and hence we admit its importance with hesitation, or boldly declare the statement of its advocates to be false, and contrary to reason or experience. Probably no operation in surgery more fully illustrates the correctness of these remarks, than *lithotrity* or *lithontripsy*. From the period of its introduction into practice by Leroy D'Etioles, Civiale, Heurteloup, and others, it has had to contend with fierce, violent, and most unjust opposition; and even down to the present moment, you will find surgeons decrying both the grinding and crushing processes, and declaring them to be, in the majority of cases, of no avail, while in others, they are positively murderous.

With the view of ascertaining the precise estimate placed upon the measure in Europe, I took especial pains to enquire of the surgeons in London and Paris, as to what was the real condition of the operation in their respective cities. In both I found it in high repute, but more especially was this the case in Paris. In the latter city, the dexterous and excellent surgeons, Civiale and Leroy d'Etioles, perform it almost daily; and while they acknowlege that *lithotomy* is still the operation best suited to many cases, they yet contend that it is far more dangerous, and gives rise to much more suffering than lithontripsy. This is certainly correct, and no one who gives the operation a fair trial, can hesitate for a moment to arrive at the same conclusion. No one contends that it is to supersede the use of the knife, but it is obvious that it must ere long be considered by far the safest and least painful mode of removing a stone from the bladder of an adult, unless the case be complicated with lesions of other organs in the vicinity. I may remark, that the original operation of

*lithotrity* has given place almost entirely to the more modern one of *lithontripsy*. Of *Liethectasy*, I heard but little, either in London or Paris, and the operation, though still recommended by some, cannot be considered as one at all popular with the profession at large.

*Hypodermatomy.*—No operation of modern times has attracted more attention, excited more controversy, been more shamefully abused, or unjustly lauded, than what has been termed by Sedillot, *Hypodermatomy* or *sub-cutaneous section*, and which has been, in some shape or other, so extensively employed for the relief of various deformities. As I have long been known as the advocate of this measure, when restricted to its proper limits, I made its investigation one of my principal objects, and it was with no little gratification, I assure you, that I found all operating surgeons, *without exception* I believe, while they reprobated its careless and indiscreet employment, declaring their entire confidence in the operation, when properly and judiciously practised. In short whenever I put the question, "What is your estimate of sub-cutaneous section in reference to deformities?" to any distinguished surgeon, either in England or on the continent, his answer was invariably this, "I consider it one of the greatest improvements in modern surgery, and cannot conceive that any surgeon who studies the result of the operation with care and fairness, can arrive at any other conclusion." Recollect this then, when you hear the method decried by those who have either never given it due attention, and are thus incompetent to decide upon its merits, or, who oppose it on what they consider correct principles, and are perfectly honest in this belief, (and I respect them for it,) or, who finally condemn it from prejudice alone. And rely upon it, that every surgeon abroad considers the various modifications of sub-cutaneous surgery, especial tenotomy, aponeurotomy, and myotomy, as the least dangerous, least painful and most useful, of all our means for the relief of deformities of various kinds.

*Stricture.*—A good deal of controversy is now going on in Europe in reference to the new treatment of stricture of the urethra by perineal section, proposed by Mr. Syme, of Edinburgh. That the operation may possibly prove useful in certain difficult cases of permanent stricture is possible, but that it can ever become a popular or necessary operation in the vast majority of cases of

this disease, is scarcely probable. For the present, however, we are unable to speak decidedly upon this point, as the method has yet to be subjected to the test of observation and experience.

*Aneurism.*—You are all aware of the terrible nature of *aneurism*; one of the most fearful diseases to contemplate in its progress, as well as one of the most difficult to manage with success. The danger attendant upon the usual operation for this affection, and the failure of the old method of treatment by *compression*, induced, a few years since, Mr. Hutton, of Dublin, and afterwards Drs. Cusack, Bellingham, Kirby and Harrison, of the same city, to attempt its cure by a new application of compression, called by them *intermittent* or *irregular*. I found surgeons very much divided in opinion relative to the merits of this new measure, and several very unfortunate cases in which it was employed, were recently announced in the London Hospitals. From my own observations, however, and from what I could gather from some of the most experienced of those who had employed it, I am led to consider the plan one of the most important improvements in modern surgery. It can never entirely supersede the use of the ligature, but it will answer in a great majority of cases.

*Parotid Gland.*—As extirpation of the *Parotid Gland* has given rise to much controversy on this side of the Atlantic, I was anxious to ascertain the estimate placed upon the measure by surgeons abroad; and therefore made it a subject of diligent enquiry. As I anticipated, their exists great contrariety of opinion in relation to the *utility* of the process, but I found *none* who doubted its *possibility*. Indeed, the question seemed to bear almost *exclusively* upon the first proposition.

(To be continued.)

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*Fecundity of a Free-Martin.* By JOSEPH MOORE, of the Jefferson Medical College, and of Cumberland Co., New Jersey. (Communicated by Professor Dunglison.)

Professor Dunglison,

DEAR SIR,—I herewith forward you a newspaper, published in the town where I reside, in which is a communication from a very intelligent farmer, relating to a free-martin which he raised on his farm, and which not only received the male, but gave birth to a healthy offspring.

The gentleman who is the author of the communication, I have known for several years, and can therefore vouch both for his intelligence and veracity.

As a knowledge of such cases is not devoid of interest to persons devoted to scientific pursuits, I write the accompanying note, for the purpose of adding my testimony to the truth of the gentleman's communication, as he is, most likely, unknown to yourself. Very respectfully,

JOSEPH MOORE.

*Philadelphia, Jan. 7th*, 1852.

From the West Jersey Pioneer, Oct. 15th, 1851.

A NUT FOR THE CURIOUS.—On the 5th of the 6th month, 1849, one of my cows dropped two calves, a male and female, and on the 11th inst. the latter dropped a calf, healthy and strong, and has the appearance of making a good cow. I have never heard of a similar instance.

Respectfully, BENJAMIN SHEPPARD.

This case disproves the correctness of the commonly received opinion, that the female of twin calves is invariably barren and unfruitful.

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## BIBLIOGRAPHICAL NOTICES.

*A practical Treatise on the Diseases of the Lungs and Heart, including the Principles of Physical Diagnosis.* By WALTER HAYLE WALSHE, M. D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine, in University College, London; Physician to the University College Hospital, &c. 12mo. pp. 512. Philadelphia: Blanchard & Lea, 1851.

Most of our readers are, doubtless, familiar with the Essays which have placed Professor Walshe's reputation so high on the list of the scientific medical writers of Great Britain—his treatise on Cancer, and on "Adventitious Products," the last published in the Cyclopædia of Anatomy and Physiology. His public claims to practical skill in the diagnosis and treatment of the class of diseases to which the volume whose title we have above copied refers, have hitherto chiefly rested upon his Clinical Lectures,

published in the Lancet, a report on Phthisis in the Brit. and For. Med. Rev., and a little book entitled "The Physical Diagnosis of diseases of the Lungs," published in 1842. This latter was reprinted in this country, in 1843, and found great favor with the profession. The present volume has a much wider range than its predecessor, as is evident from its different entitulation. We propose to exhibit to our readers its plan and scope.

Part 1st.—The first chapter treats of the physical examination of the Lungs,—by means of Inspection, application of the hand, Mensuration, Percussion, Auscultation, Succussion, and by determination of the situation of surrounding parts and organs. The second chapter is occupied with the physical examination of the Heart and great vessels, conducted by methods similar to those employed in the examination of the lungs.

Part 2d.—Applies these principles of investigation to the study of the diseases of the Lungs, Heart, and Aorta; each disease of these organs respectively being separately considered in sufficient detail.

The volume is pretty equally divided between these two portions.

Many persons suppose that the recognition of diseases of the chest by physical exploration is a very simple and easy process; one which requires only the hearing ear, and the seeing eye. But this is a great mistake; and it is an error, too, which has given rise to very many wrong diagnoses, and brought much discredit on the method pursued. Others ridicule the whole procedure. Some years ago, we heard an eminent professor of the Theory and Practice of Medicine, who was at times facetious, assure a large class of students that it was nonsense to attempt to ascertain the existence of disease in the chest by the use of the stethoscope. Said he, "you might as well study astronomy with the aid of a clyster-pipe." Nor was the professor far astray, if the examiner rely only upon his ear, and not also upon his reasoning faculties.

There is no branch of practical medicine in which there is greater necessity for the exercise of sound judgment, careful discrimination, and logical inference, than this. The mind must be trained and educated, as well as the senses of hearing, touch

and sight, before a physician can be considered a reliable investigator of the diseases of the thoracic organs.

The perusal of Dr. Walshe's treatise, will abundantly satisfy any one of these truths. We do not observe anything particularly novel in the plan which the author has adopted; but he exposes in a very striking manner the difficulties and sources of error which may perplex and mislead the examiner. Indeed, we do not remember to have seen in any other treatise on this subject, these points so well set forth. And in like manner his explanation of the difficulties, and of the means by which they may be overcome, and a correct opinion arrived at in spite of them, is equally satisfactory.

We shall now glance at a few of the prominent topics discussed.

After describing the method of conducting an examination of the chest by simple inspection, the application of the hand to its different regions, and mensuration, the author alludes to a means of diagnosis as to the amount of disease in the lungs, which has at different times attracted considerable attention, viz., by measuring the cubic inches of air which can be expelled from the chest by the fullest possible expiration, succeeding the fullest possible inspiration.

The instrument contrived by Dr. Hutchinson, which he terms the *spirometer*, is unquestionably the best adapted to ascertain this fact. By means of this apparatus, it will be recollected, this gentleman has ascertained that there exists a general ratio of proportion between the volume of air which the lungs in health are capable of containing, and the height of the individual. The mean quantity is 174 cubic inches for the height of 5 feet; and for every additional inch of stature from five to six feet, eight cubic inches of air, at the temperature of 60° F., are expelled by a forced expiration. Dr. Walshe admits the correctness of this law, in the main; but he very properly objects to its specific accuracy in practice, on the ground that however truly it may coincide with general results, "the individual healthy standard occasionally varies very widely on either side of the general one; so much so, that a great fall may have taken place, from disease, in the breathing-volume of an individual, at a time when he expels a quantity of air above the average standard of men above his height; according to the *general* standard he is more than

healthy, he is extra-capacious; according to *his own*, he is diseased. For certainty of observation the individual standard is required; the present man must be compared with the past man, and not with other men. Again, a fall below the general average, is a surer indication of disease than the maintenance of the general average, or even a slight excess, is of health." During the last few years, we have had the opportunity of testing pretty fully the applicability of the spirometrical guage; and we can most heartily agree with Dr. Walshe in the necessity of comparing the cubic capability of the lungs of the individual in disease of these organs, with that of the same in health, before any reliable opinion can be formed as to the existence or non-existence of pneumonic disease. And even then we do not think that we have any sufficient warranty for concluding that the reduced respiratory volume indicates affection of the respiratory organs; the difficulty may be entirely exterior to these, and seated in the moving powers of respiration,—in the spinal cord or nerves—or it may be due to imperfect development of the respiratory muscles.

The chapter on Percussion is very thoroughly studied, and contains a full statement of all the important details respecting this means of diagnosis.

The chapter on Auscultation as applied to the respiratory organs, occupies rather more than eighty pages—a proportion of the whole volume, which is not too large, considering the importance of the subject. In it we find remarks appertaining to all the questions which are likely to arise in the mind of any one who is studying this matter; not only are general directions given with reference to the practice of auscultation, but all the instances, so far as we can recall them, are adduced in which the particular auscultatory phenomena are observed, together with the explanation of this occurrence. It may be objected that the author refines too much for the necessities of practice. But we do not think so. The mere fact that many may be confused by multiplicity of detail, and be led into mistakes rather than benefited thereby, is no argument against the propriety of adopting any arrangement of subdivisions and nomenclature which will enable the student to arrive at the whole truth. We are sometimes afraid, it would seem, that we may become too accurately informed.

With regard to some of the auscultatory signs, Dr. Walshe thinks the crepitant rhonchus of Pneumonia "occurs in the parenchyma of the lung itself, especially in those portions of it immediately contiguous to, and actually forming the walls of, the ultimate termination of the bronchi; and that its physical cause is the sudden and forcible expansion of that parenchyma, glued together, as it were, by exudation with which it is infiltrated. Each single crepitus or click would thus signify the expansion of a cell, and be produced by the unfolding of surrounding glutinous tissue necessary for that expansion." (p. 113.) This, it will be noted, is not the ordinarily admitted rationale. Another explanation which is at least equally satisfactory, fixes the seat of this rhonchus within the air-cells, and ascribes it to the separation of their agglutinated walls.

The peculiarities of the cavernous rhonchus, and the sources of fallacy connected with it, are well exposed.

In his observations on the adventitious sounds produced in diseases of the pleura, the author refers to the occurrence of friction sound in emphysema of the lungs without pleurisy. (p. 123.) Laënnec first stated the possibility of this coincidence, and indeed considered it as highly important in the diagnosis of emphysema; but most subsequent authorities have denied this connection. Dr. Walshe is inclined, however, from cases which he has witnessed, and others of which he possesses records, to agree with Laënnec so far as to admit that it does happen in some instances that a friction sound is occasioned in emphysema beneath the pleura, by which the latter is rendered irregular and rough.

Some curious remarks are made upon "pleural pseudo-rhonchi," (p. 126) showing that a sound similar to that of the sub-crepitant rhonchus may be produced entirely exterior to the lungs, in the pleura, or rather in fluid contained in the meshes of adventitous tissue existing upon the pleura, in the movements of this membrane during respiration.

We are compelled to pass over the remainder of this chapter, exceedingly rich though it be in details concerning the phenomena of vocal auscultation, if we may so speak; indeed, we do not know where else this subject is so thoroughly and lucidly discussed.

The chapter which follows, on the physical examination of the

heart and great vessels, occupies about as much space as the last, and is equally well worthy of perusal. We can call attention only to a few points from amongst the many which are presented to us.

Dr. Walshe does not attempt to explain the manner in which the *impulse* of the heart is produced, but ascribes it, as is ordinarily done, to the systole of the ventricles, without giving us his reasons for the opinion. This theory is open to objections, and we regret that the accomplished author of the treatise under consideration has not favored us with a critical examination of the question. It seems to us that the weight of evidence is in favor of the theory which attributes the heart's impulse against the walls of the chest to the *diastole* of the ventricle, which is rendered forcible by the active contraction of the auricle whereby the ventricle becomes filled with blood. The arguments in favor of this view are briefly but clearly stated by Dr. Stillé in the American Journal of Medical Sciences, July, 1846, p. 174, and also in his excellent treatise on General Pathology; they are also detailed at greater length by Hardi et Béhier, "Pathologie Interne," p. 326, vol. 1. To these sources we would refer our readers. The facts upon which these arguments are based, are derived from observations of the motions of the heart of the frog, which is transparent, and which is not disturbed in its action by the interference with the function of respiration which is unavoidable when vivisection is practised upon a warm-blooded animal; from watching the movements of the heart of the human being, when, as has not unfrequently happened, the anterior parietes of the chest have been congenitally wanting over the cardiac region, or have been removed by accident; and finally, from study of the phenomena presented in certain pathological conditions of the organ. "When the heart of the frog, which is transparent, is examined, the apex is seen to be thrust forward at the same instant that all the dimensions of the organ are enlarged, and its color shows it to be distended with blood; while the apex is retracted simultaneously with the lessening of the size, and the disappearance of the color of the heart; in other words, the projection of the apex corresponds with the diastole, and its retraction with the systole of the ventricle." (Stillé's, Gen. Pathol. p. 319.) In a case reported by Cruveilhier, in

which a child was born with a deficiency in the upper part of the sternum through which the heart projected, and in which life continued for nine hours, the contraction of the auricles was seen to be exactly synchronous with the diastole of the ventricles. During the ventricular systole, the heart contracted in every diameter, and the only portion of it which was thrust forward was the apex, and that with a slow spiral motion. The diastole of these cavities, on the contrary, was accomplished with rapidity and energy, "so that the hand which had been closed upon the heart was opened with violence." A case similar to this was reported by Dr. Robinson of Va., in the American Journal, Feb. 1838; and we have very recently read the account of another analogous to these, but we have, unfortunately, forgotten where it is recorded. Finally, M. Beau, (Archives Gén. de Médécine, Dec. 1835, p. 426; July 1841, p. 300,) Dr. Corrigan of Dublin, and Dr. Stillé (Am. Journ. loc. cit.,) have shown that the analysis of reported cases of hypertrophy of the heart establishes the fact that, in simple hypertrophy of the ventricles, of any degree, the impulse is diminished or entirely wanting, unless there be corresponding hypertrophy of the auricles. From these statements it is evident that the cardiac impulse cannot be admitted to depend upon the ventricular systole alone, as is taught by Dr. Walshe. If the view here advocated be the correct one, it must be allowed too, to modify the author's explanation of the mode in which the *first sound* of the heart is produced; for, certainly, the active contraction of the auricles and the rushing of the blood through the auriculo-ventricular orifices must generate a sound. And, inasmuch as the ventricular systole follows instantly upon that of the auricles, the sounds generated by the two acts, together with the violent impetus of the blood against the now tense tricuspid and mitral valves, and the rushing of the torrent through the aortic and pulmonary openings, will sufficiently account for the dull, prolonged first sound.

In the application of percussion to the heart, to ascertain its boundaries and exact situation, we are glad to see that Dr. Walshe recognizes the importance of the suggestion first made by Drs. Camman and Clark, of New York, in favor of using the stethoscope while percussion is practiced. This combination certainly makes the investigation more satisfactory in doubt-

ful cases; but it requires considerable familiarity with the practical manipulation, to make it a convenient means of diagnosis.

Everything relating to the modification of the normal action and sounds of the heart produced by diseases, both of this organ and of organs exterior to it, is most instructively considered.

We now pass to that portion of the book which is devoted to the *Diseases* of the thoracic viscera. This, as we before remarked, occupies about one-half of the volume, a space not large enough, indeed, to enable the author to be as minute and thorough as his readers would desire; but we can assure them that his powers of compressing and condensing the results of his enlarged experience and logical study, have been exercised in a most remarkable manner. We shall ask attention to only a few topics.

His remarks on dilatation of the bronchial tubes are admirable. After alluding to the secondary effects produced by this abnormal condition, he thus points out the means of distinguishing it from phthisis. "In phthisis, percussion is dull *above* the clavicle; not so in dilated bronchus; below the clavicle, too, the dulness is greater and more extensive in the former than in the latter case. The signs of the tubercular excavation are found at the apex; those of dilated bronchus generally lower—say at the union of the middle with the upper third of the chest. When tubercle has reached the excavation stage, flattening at the surface is habitually more marked under the clavicle than it ever is in bronchial dilatation. I have never known hemoptysis produced by chronic bronchitis, with dilatation alone; if it exist, and there be no evidence of mitral disease, the evidence that the excavation is tuberculous, becomes a matter of necessity. Extreme emaciation does not, so far as I have seen, come of the bronchial disease alone. The course of the physical signs will avail us also, if the case continue for a time under observation. In phthisis, the signs are, as a rule, constantly increasing in degree and extent; in bronchial dilatation, they may remain for months unaltered in both these respects; dulness under percussion, as remarked by Dr. Stokes, precedes the signs of cavity in phthisis, and does not occur till after them in bronchial dilata-

tion; to the latter clause, however, I have seen exceptions." Page 250.

The subject of Pleurisy, in all its varieties, is very ably treated. Concerning the *prognosis*, he says: "Death is so rare a result of the disease, when attacking individuals free from organic affections, that I have neither myself (and I have carefully attended to this point, since my attention was first drawn to it, years ago, by M. Louis) lost a patient from pure primary idiopathic pleurisy, with or without effusion, nor known of an occurrence of the kind in the practice of others." (Page 269.) The treatment recommended for the acute stage consists in moderate depletion, general and local; slight mercurialization; and the application of a blister over the *neighborhood* of the chiefly affected part, rather than over the spot itself. If fluid accumulate, or remain long in the cavity of the chest, flying blisters in succession, and iodureted liniments should be employed externally, and diuretics internally; among the latter, Dr. Walshe advises the tincture of iodine, in scruple doses, freely diluted.

The author's remarks concerning the propriety of *paracentesis*, the time of its performance, &c. are well conceived. He agrees with most recent authoritative writers, in recommending its early performance, after the physician has become satisfied that absorption has not taken place under proper treatment.

*Pneumonia*, as might have been anticipated, receives its full share of consideration. The author admits that in some instances, as when the closure of the bronchial tubes is very extensive, and the conducting powers of the lung are, in some inappreciable manner, annulled, the physical signs may be wholly wanting, excepting that of dulness on percussion; that simple pneumonia, without pleuritic effusion of any kind, may produce expansion, and, subsequently, contraction of the chest; that the old fashioned practice of very large and repeated bleedings is unwise and unnecessary; that tartar emetic is a remedy of vast importance in the treatment of this disease, and that "mercurials appear to him to be desirable in those cases only, where, for some cause or other, antimony is inadmissible." We cannot too highly commend this section of the volume, and we regret that our limits will not permit us to make copious extracts from

it, for there is scarcely a question of interest which does not receive light from Dr. Walshe's observations.

The section on Phthisis' is one of the ablest in the book, and this is a warm eulogium where all are good. Few physicians have had so extensive opportunities for studying this disease as the author of this treatise, and none are better qualified for the task. The points to which especial attention is herein devoted are, the significancy of hæmorrhage as a symptom of phthisis; the means of arriving at the diagnosis of the incipiency of this affection; and the efficacy of treatment in curing or mitigating it. He thinks that cod-liver oil "more rapidly and effectually induces improvement in the general and local symptoms than any other known agent," but that the degree and permanency of its curative powers, are not yet determined sufficiently; he prefers the *brown* oil to either of the other varieties. "The dose of the oil at the outset should never exceed, (often fall short of,) a drachm twice daily; it may be taken in milk, water, orange-wine, or any other aromatic water agreeable to the patient. I have never seen any good, but often ill, effects to follow the attempts to pour in large quantities." Page 360.

An interesting section is allotted by the author to the diagnosis of intra-thoracic tumor, which is of great consequence, as it is so easily confounded with aneurism.

Diseases of the heart and large vessels, occupy rather more than one hundred pages of the volume. We should like very much to review this portion of the book carefully, and to quote from it for the edification of our readers. But the details into which we have been tempted by our admiration of that part of the work which we have already noticed, make it necessary that we shall proportionably neglect this. It contains, notwithstanding, abundant food for study and profitable search. But we must here bring our remarks to a close, assuring those who may have followed us thus far, that the excellence of the treatise is the same to the very end. We can unhesitatingly recommend it as the best in the language.

*The Transactions of the American Medical Association. Instituted* 1847. Vol. iv. pp. 677.

The present volume of Transactions lacks none of the interest and merit which have distinguished its predecessors. It presents unequivocal evidence of the increasing vigor of the body from which it emanates; which, although yet in its infancy, is beginning to be felt through the whole medical profession of the United States. It is true, that on the great question of reform in the existing methods of medical education, the primary object of its organization, the Association has, as yet, made but little practical progress. It has, however, raised its standard and announced its wishes, and despite the efforts of the few who deem all such movements as chimerical or meddlesome, the great body of its members have steadfastly adhered to their original ground, and are determined to move forward until the united influence of the profession shall secure a more thorough system of education than has yet been realized.

The Report on Medical Education contained within the volume before us, affords ample evidence of the interest taken by the Committee in this branch of the business of the Association. It is an able and high-toned document, full and candid in its exposure of existing evils, and hopeful in its anticipations for the future. "Association," says the Report, "is the great means of creating, and bringing into action, a sound public sentiment amongst medical men." And again: "If all who desire that the standard of medical character and attainment be raised, would turn their influence into this channel, a great change would at once be effected in the condition of the profession of this country. The demi-quacks who so much disgrace our profession in the eyes of the public, would be driven from our ranks, public sentiment, both among medical men and in the community at large, would be renovated, and, consequently, the value of professional reputation would rise, while that of a merely popular one would fall, even as a source of emolument. A reform in our system of education would be rigorously prosecuted, and our schools would cease to send forth such numbers, as some

often do, of unqualified physicians, to give currency to error, and delusion in medicine, to destroy health and life, and to bring contempt upon our noble science."

This testimony in favor of the value of association as the primary means of improving and elevating the profession, enforced as it is by many clear and cogent arguments, deserves the serious and renewed attention of medical men; and each one who becomes convinced of the simple proposition, that it is by this means that the desired reforms in medical education and character are to be obtained, has a plain course before him. Let him join the medical organization of his district; or if none exists, let him use his influence with his brethren to form one, which shall be governed by the regulations pointed out by the National or State Medical Society, of which it should form a component part. Let him not be a mere nominal or idle member of such a body; but turning aside from his personal duties and professional cares, let him devote a portion of his time and talents to give it character and efficiency.

In connection with this subject of medical organizations, we were gratified to notice that certain resolutions of the Philadelphia County Medical Society, proposing a modification in the present system of delegation to the National Association, were brought before the meeting at Charleston, by Dr. Yardley of this city, and received a respectful consideration, by being referred to a committee of five members with instructions to report next year.

The change proposed by the resolutions consists in so altering the constitution of the National Medical Association, as to make the delegates consist *only of persons appointed by the County and State Medical Societies.* It is obvious that by this arrangement a powerful motive would be created for the formation of these local Societies, as furnishing the only doors of entrance to the National Association, and hence, a more thorough and effective organization of the medical men of the country would be promoted.

If this be the main hope of the friends of medical progress, the grand lever whereby the incubus of ignorance and incompetency is to be removed, we can see no more effectual method of

promoting it than by the adoption of the change recommended by the Philadelphia Society.

We repeat then, that the able report and resolutions on Medical Education, from the pen of Dr. W. Hooker, of Connecticut, together with the project for amending the constitution to which we here refer, afford gratifying evidence of a progressive movement in the right direction, and we think that those most skeptical of the advantages of association, must admit that there is at least an earnestness and uniformity in the action of this great national body, which, whatever may be its future influence on the interests of the medical profession, must command the respect and deference of every member of it, who is alive to the true interests of his calling.

Another important feature in the proceedings of the last meeting, is the change effected in the mode of bringing medical papers before the Association. The original plan of presenting elaborate reports on the progress of the different branches of medical science during the year, has been superseded by the appointment of Committees to consider and report upon special subjects of inquiry, selected as most suitable for investigation. The selection for the coming year embraces twenty-seven subjects, most of which possess high interest to the medical enquirer. Should these committees fulfil their duty in a creditable manner, a vast fund of useful information will be thrown before the profession, upon a variety of important topics, while the character of the Association as a scientific body will be greatly enhanced, both at home and abroad.

As an additional means of securing valuable contributions, it was agreed to invite volunteer papers upon any subject which their authors may choose, to be presented to the Association at the discretion of a committee appointed to receive them and to judge of their merits; and, in order to stimulate talent by competition, a prize of fifty dollars, or a gold medal of that value, will be awarded to the authors of each of the five papers presented to the Association, which the committee shall consider the most meritorious.

These measures we cannot but esteem as highly important, in imparting to the Association a new element of strength and usefulness, by attracting towards it cultivated minds, and making

it the channel through which copious streams of knowledge will flow. We believe there are many young men in our profession, gifted with a high order of talent, who suffer their minds to languish and grow dull, for want of a stimulus to exertion, such as is here held out. By entering the list of competitors for the honorable position now offered to their acceptance, latent powers will be developed, and new energies will be aroused which may lead to success, and exert a powerful influence on the future life of the aspirant. Already has the successful candidate for the first prize essay presented to the Association, obtained a position amongst his compeers, which years of studious toil might not have secured him, had not his labors been directed into this particular channel.

Another matter which appears to have claimed the attention of the Association, was the subject of demonstrative midwifery. This was specially referred to the committee on medical education by the last meeting; and has received from it a full, candid, and deliberate examination. The conclusion of the committee is against the plan adopted by the Institution which introduced the subject to the notice of the Association.

"Granting," says the Committee, "all that can be claimed with any plausibility for the advantages mentioned, they are not of sufficient value to make it proper, that woman, in the hour of her extremity, should be made the subject of public exhibition."

This report was deemed of sufficient importance to call for the passage of a resolution confirming the opinions thus advanced, and, so far as its unanimous approval by the Association is an index of the general sentiment of the profession, it is clear and decided.

One other matter in the minutes attracted our attention, and though not of great importance, we feel constrained briefly to call the attention of our readers to it. It is a resolution of Dr. A. H. Stevens, of New York, for the appointment of a committee to procure a tablet with a suitable inscription, commemorative of the Charleston meeting, and in order "signalize the gratitude of the members for the extraordinary professional and social enjoyment that accompanied it."

Now no one can doubt that our medical brethren in Charleston

did everything which kindness and hospitality could suggest, to render the visit of the members of the Association to their city agreeable and even memorable; but in this respect, they did no more than their feelings prompted, or than the profession in other cities have done, and may do hereafter. It was, therefore, unnecessary, and may even be deemed invidious, to signalize their kindness by extraordinary proceedings, and we cannot but regret that the Association departed from its accustomed course in so doing.

The reports of the standing and special committees cover 500 pages of the volume before us. They embrace the usual amount of matter of scientific interest, and are drawn up with decided ability.

It would be impossible, within our limits, to analyze the vast amount of material thus presented, and we shall attempt no more than a brief notice of such points as seem to possess extraordinary interest.

The report on "Practical Medicine" from the pen of Dr. Austin Flint, of Buffalo, is especially interesting, from its containing a history of several remarkable epidemics, which have prevailed in various sections of the Union during the year, such as cholera, epidemic dysentery, typhoid fever, dengue, &c. It is true, that these reports have reference to a few only of the epidemic diseases of the year, and those prevailing in limited sections; yet, as contributions to the meagre fund of knowledge which we possess on this important branch of medicine, they must be highly prized:

"Epidemic cholera, (says the report,) has prevailed to a considerable extent within the limits of the United States during the past year, and, as heretofore, its progress has been attended by a large fatality. Its ravages have been confined chiefly to places situated on or near the Mississippi and Ohio Rivers, the north-western lakes, more especially the two former, and to California. In the States situated on the Atlantic coast, and between the latter and the Alleghany Mountains, it does not appear that the disease has prevailed as an epidemic.

Prof. Alanson Clark, of the N. Y. College of Physicians and Surgeons, in a letter to the chairman of the committee, states that, on inquiring of numerous practitioners of the city of New York if they had met with the disease, the answer was uniformly that they had not, nor had they heard of a single case.

He adds that, on applying at the city inspector's office, he found seven deaths had been reported as caused by cholera, one of these being in

June, and six in July; but of the correctness of the diagnosis in these cases he is not fully assured.

"At Boston, the occurrence of a single case only has been chronicled during the year.

"No reports of cases occurring at Philadelphia, Baltimore or other places within the territory stated to have been exempt from the epidemic, have fallen under notice. Reports more or less full, in medical journals, and communications addressed to the committee, furnish historical accounts of the disease as it has prevailed at New Orleans (La.), St. Louis (Mo.), Louisville (Ky.), Cincinnati (Ohio), Columbus (Ohio), Keokuk and Burlington (Iowa), Kalamazoo (Mich.), Chicago, (Ill.), Buffalo (N. Y.), and Sacramento (California). The committee will notice the more important facts contained in the several reports, and then offer such remarks as may suggest themselves."

A succinct, and in some cases, highly interesting history of the disease as it prevailed in different localities, follows, and the result is thus summed up by the Committee:

"The accounts that have thus been submitted are far from affording a complete representation of the progress of cholera during the past year. They relate to the epidemic only as it existed at several prominent places, and they are, in general, defective in not embracing various particulars of importance in the history of the disease. Places on the great western rivers and lakes, from which no authentic reports have been made, have suffered more or less. The disease is also known to have prevailed to a considerable extent on the vessels navigating these waters.

"The majority of places from which accounts have been presented, are connected with each other by a continuous water communication, by means of which an extensive commercial intercourse is kept up, forming, also, a thoroughfare for a large proportion of the immense tide of foreign and domestic immigration. This fact, probably, in the minds of some persons, will give rise to an inquiry respecting the transportation of the disease successively to these places. With reference to this inquiry, it is to be observed that, as it would seem, to New Orleans belongs priority in the presence of the disease, it having been at no time absent from that city, although never prevailing to a great extent, and in a great measure confined to foreign immigrants. At Louisville, it appeared in two successive short outbreaks in June and July, the determining causes being traceable to local sources. At Cincinnati, it prevailed from June to the 15th of August. At Chicago, from the 23d of June to September 1st. At Buffalo, it can hardly be said to have prevailed as an epidemic, but the greater number of cases occurred in July, August and September. With reference to the present inquiry, it is much to be regretted that accurate reports have not been made of the occurrence of the disease at numerous places on the same extensive routes of water communication. The fact that the disease was in a great measure limited to these routes, appearing in but

few other portions of the United States, is worthy of note in this connection. It appears that in all the places that have been mentioned, in which statements relative to the point are made, the development of the disease was preceded by cases occurring among persons lately arrived from other places in which the disease existed. The uniformity of this fact invests it with a certain degree of significance; but, it is to be observed that these cases frequently preceded for a considerable length of time, nor did the subsequent indigenous cases have any apparent connection with them. Although, as just stated, the epidemic is generally preceded by imported cases, the converse is not true, viz., that the importation of cases is uniformly followed by indigenous cases. The history of the epidemic, moreover, in most of the places mentioned in this report, shows, not only a commencement at a period more or less remote and disconnected from the introduction of the disease, but a career which seems necessarily to involve a prevailing epidemic influence having a limited duration, which we should suppose would be otherwise if each case contributed, in any manner, to the special cause. In view of these considerations, while it must be admitted that the transportation of cases from one place to another apparently has some connection with the subsequent development of the disease in the latter, the nature and extent of this relation cannot, in the present state of science, be defined or explained."

As an appendix to this section of the report, is an admirable paper by Dr. George Mendenhall, entitled, "An account of Cholera as it appeared in Cincinnati during the year 1850," and a "Report on Fevers, &c., of New Orleans, by Dr. E. D. Fenner," which contains a history of epidemic cholera as it appeared in that city.

Epidemic dysentery has appeared in some sections of the United States, during the year, but the extent of its prevalence, and the peculiar circumstances attending its origin, could not be ascertained by the few facts presented to the Committee. A point of great interest developed by the reports received on this subject, is the account given by different contributors of the treatment found most successful in their hands. The conclusions to be drawn from these are thus announced by the Committee:

"Considering the great diversities of character which an epidemic disease is apt to assume in different sections of country and seasons—diversities from which dysentery is certainly not more exempt than other epidemics—the practical views of a pretty large number of observers, which are presented in the foregoing collection, exhibit, in some important features, a uniformity which is worthy of note. It is to be considered, moreover, in this view of the subject, that the different observers, by whom these practical views are contributed, are not only

remotely situated with respect to each other, but there is no reason to suppose that the several communications had any connection with each other, by way of suggestion, or otherwise.

"In so far as the facts and opinions embraced in these communications are to be considered as supplying data for an induction, the several conclusions may be summed up as follows:

"*a.* In the management of epidemic dysentery, as it has prevailed at the places and periods referred to in the papers that have been contributed on the subject during the past year, depletion by blood-letting, cathartics, and the free use of mercurials, are not required, but will be likely to do harm.

"*b.* Opium, exhibited in decided doses, exerts a salutary influence in relieving painful symptoms, and controlling the severity of the disease.

"*c.* The nitrate of silver is a valuable remedy, employed with a view to a local and general effect.

"*d.* Tannic acid, and the acetate of lead, under circumstances denoting the propriety of astringents, are useful remedies.

"*e.* To support the powers of the system by a timely resort to tonics, stimulants and alimentation, is an important end to be kept in view in the treatment.

"These propositions embody therapeutical principles by no means entirely new, and it is difficult to ascertain to what extent they are in conformity with prevailing opinions. The committee, therefore, are unable to say in how far they are to be considered in the light of an improvement in the management of the affection to which they relate."

An epidemic fever of a singular character, prevailed during the year in many of the Southern States, under the name of Dengue, or "break-bone fever." An excellent descriptive history of this singular epidemic is contained in the report before us, the main features of which we would gladly transfer to our pages, did not our limited space forbid. We can only refer to the sources from which the materials for this history were derived, in order that any of our readers, who may feel inclined, can examine for themselves, viz: "A history of the Epidemic Dengue, as it prevailed in Charleston in the Summer of 1850," by Prof. Samuel Henry Dickson, of the Medical College of South Carolina, published in the Charleston Medical Journal and Review, November, 1850. "History of the Break-bone fever, an epidemic which prevailed in Charleston in the Summer of 1850, by Wm. T. Wragg, M. D.," same Journal, March, 1851. "History and treatment of the Dengue fever, prevailing in Augusta, in the year 1850, by Henry F. Campbell, M. D.," Southern Medical and Surgical Journal, Jan. 1851.

The Report on Surgery, by Dr. Paul F. Eve, opens with a brief description of the value of anæsthetic agents, in which the Committee express an "undiminished confidence in them, and a grateful admiration of the blessings they have conferred upon mankind."

Several cases of cure of Aneurism by compression, are reported amongst the events of the past year, with many other cases and operations of interest, furnished to the Committee by numerous contributors.

The report is accompanied by several elaborate and valuable surgical papers. Amongst them, Dr. Washington L. Atlee's table of all the known operations for Ovariotomy, from 1701 to 1851, comprising 222 cases, with a synoptical history of each case; and the surgical statistics of the New York Hospital, compiled from the hospital records by Frederick D. Lente, M. D., are especially worthy of notice.

The results of the operation in the 222 cases of ovariotomy, collected by Dr. Atlee, are thus summed up:

"I. Of these 222 cases, 52 were of the minor section, 153 of the major, and 17 unknown.

"II. Of the 52 minor operations, 39 recovered, and 13 died, or 1 in every 4, or 25 cases in 100.

"III. Of the 153 major operations, 95 recovered, and 58 died, or 1 in every $2\frac{37}{100}$, or 37.91 cases in 100.

"IV. Of the 17 unknown sections, 12 recovered, and 5 died, or 1 in every $3\frac{2}{5}$, or 29.41 cases in 100.

"V. Of the 222 cases, 146 recovered, and 76 died, or 1 in every $2\frac{37}{100}$, or 33.78 cases in 100.

"VI. Of the 222 cases, 57 were not completed, or 1 in every 3 17-19ths, or 25.68 cases in 100.

"VII. Of the 222 cases, there was no tumor in 6, or 1 in every 37, or 2.7 cases in 100.

"VIII. Of the 57 unfinished operations, 24 were the large section, 27 the small, and 6 unknown.

"IX. Of the 24 unfinished large sections, 17 recovered, and 7 died, or 1 in every 3 3-7ths, or 29.17 cases in 100. The proportion of unfinished operations in the large sections, is as 24 to 153, or 15.69 cases in 100.

"X. Of the 27 unfinished minor sections, 23 recovered, and 4 died, or 1 in every $6\frac{3}{4}$, or 14.81 cases in 100. The proportion of unfinished operations in the small sections, is as 27 to 52, or 51.92 cases in 100.

"XI. Of the 6 unfinished unknown sections, 5 recovered and 1 died, or 1 in every 6, or $16\frac{2}{3}$ cases in 100.

"XII. Of the 57 unfinished operations, 45 recovered and 12 died, or 1 in every 4¾ cases, or 21.05 cases in 100.

"XIII. Of the 57 unfinished operations, 25 were merely exploratory, all of which recovered.

"XIV. Of the 6 operations in which no tumor was found, 5 were major and 1 minor; 3 of the former recovered, 2 died; and the minor recovered; making 4 recoveries, 2 deaths, or 1 in every 3."

The rate of mortality after the operation according to the above table, is 26½ per cent.

The Report of the Committee on Obstetrics, by Dr. D. Humphreys Storer, covers over fifty pages of the Transactions, and contains a full resumé of the facts and interesting or important cases, in this department, which have been brought to the knowledge of the committee, through the medium of the Medical Journals published during the year. It is a valuable annual abstract of this branch of medicine, and may be consulted with advantage by the practitioner.

We have already referred to several important matters discussed in Dr. Hooker's admirable Report on Medical Education, and might, with advantage, present to our readers a full analysis of it under its appropriate head; but our limits forbid us to do more than to commend its careful perusal to the members of the profession generally, believing, as we do, that it contains a lucid and forcible argument of the necessity of reform in our system of medical education, together with the true principles upon which such a reform should be based. We were gratified in observing amongst the proceedings of the Association, the following resolution in reference to this report, which we cordially recommend to the bodies to which it refers: "Resolved, That it be recommended to the several State Medical Societies throughout the Union, to procure a re-publication of the Report of the Committee on Medical Education, for general distribution among the profession."

This recommendation is now the more imperative from the fact that, owing to a late calamitous fire in Philadelphia, the larger part of the edition of the present volume was consumed, leaving but a little over 500 hundred copies for distribution; thus cutting off the great body of the profession from the reading of this and the other reports.

The report on Medical Literature, Dr. Thomas Reyburn,

Chairman, contains a full and satisfactory review of the periodical medical literature of the year, with some excellent observations on the general tone and character of the productions which appear in the Medical Journals, and the means calculated to improve them. The Committee complain of the indisposition of Editors to contribute to their own pages, and of their want of care in correcting the contributions of their correspondents. "More of original contributory matter," says the Committee, "and strict supervision of their columns on the part of the Editors, would, we are convinced, improve the character of this important department of our literature, and are most certainly portions of editorial duty due to readers, by virtue of implied contract with them."

One section of this report is occupied with an able and ingenious disquisition upon the causes and circumstances which are impeding the growth of American medical literature, and which make it so inferior to the European, together with suggestions as to the best means of fostering and improving it.

The committee attribute much to the establishment and influence of scientific societies of a high grade, as a means of arousing an impulse to literary effort. The following extract upon this point is worthy of attention:

"The organization of the National Medical Association has aroused a feeling of interest, and awakened a spirit of inquiry into the state of the profession, which need only to be taken advantage of, for the furtherance of the end we have in view. Men from the far west, the borders of civilization, have left their weary round of toil, toil so weary that one might fancy it to engender hatred of the profession which exacts so much for the bread of life, to gather to its councils; the wealthy southerner has roused from his reputed indolence, and journeyed even to the distant north to glean some lessons in professional wisdom; and will it be said that, where such sacrifices are made through love of profession, greater, far greater, will not be made through the laudable ambition of identifying themselves with that profession in after years, of giving to it some record of their knowledge or experience, which will register their names upon its annals?

"It is no novelty advanced that the successful practitioner is by no means always the most scientific light in his profession. We all know and feel, unfortunately, that manner, more than matter, wins the human heart; and we all know, from records of others, even if we have not seen such, that many a gem in our profession drags on life wearily, from want of encouragement from public favor, whilst many a shallow pretender palms off charlatanry for professional skill, and rides pros-

perously on the breath of public applause through mere suavity of manner and polish of address. That this ever has been, and ever will be the case, none can doubt. But it is equally certain that, in Europe, merit in dire indigence, and talent in obscure poverty, are rescued from oblivion by the recognition of its labors by scientific bodies, the ability and justice of whose members are a sufficient guarantee to pass current the coin they stamp. Many a name, before which the practitioner in America might pause with a feeling of veneration, almost of envy, would have gone down to the grave unhonored and unknown, crushed by the bitter struggle with poverty, had not a medal or an honorary membership, aroused first friends, then neighbors, and, lastly, the reluctant, fawning world, to appreciation of merit which spoke not for itself; and many a name even now familiar to our ears as noble in our profession, has yet no light to cheer on labor, has earned as yet little reward for toil, save the recommendations to public favor of which we speak. These have ever been found powerful impulses to exertion, and we will not believe that in our country they would prove less able incentives."

With these views the Committee regard with favor the formation of a society, in connection with the National Medical Association, "for the reception and discussion of original scientific papers;" a measure which is partially accomplished in another way, by the changes adopted in the organization of the committees, to which we have already referred.

A highly interesting report on Hygiene, from the pen of Dr. Gailliard, of Charleston, completes the series. This report is confined to the following special subjects of inquiry, viz:

First, The best methods of warming and ventilating public and private buildings.

Secondly, The importance of collecting, in connection with our system of meteorological records, information in regard to the diseases of the different parts of the country; a subject presented to the notice of the Association by the Smithsonian Institute.

Thirdly, The consideration of the following Preamble and Resolution:

"Whereas, The clerical profession often, though perhaps sometimes unwarily, yield their extensive influence in the community to give currency to quackery and quack medicines, therefore,

Resolved, That this subject be referred to the Committee on Hygiene, to consider and report at the next meeting of the Association."

The importance of the subjects discussed in this report, and the ability with which they are handled, cause us to regret that so few of the members of the profession will have an opportunity of perusing them. We would, therefore, hope either that one or more of the Medical Journals would publish the report in full, or that local Medical Societies would print editions for extensive circulation.

The volume closes with the Prize Essay, which is an elaborate and valuable paper, "On the Corpus Luteum of Menstruation and Pregnancy," by John C. Dalton, Jr., M. D.

This essay is embellished with a series of highly finished colored plates, illustrative of the subject, introduced at considerable expense, and highly creditable to American art. It is, we believe, universally regarded as a rich original contribution to Physiology, evincing on the part of the author a high order of talent, and greatly enhancing the value of the present volume of Transactions.

The essay covers about 100 pages, but as it will be issued in a separate volume, and from its character would seem to demand from us a distinct notice, we shall forbear even a statement of its contents at this time. P.

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*The Microscopic Anatomy of the Human Body in Health and Disease. Illustrated with numerous drawings in colors.* By ARTHUR HILL HASSALL, M. D., author of a "History of Fresh Water Algæ," Fellow of the Linnæan Society, &c. &c. *With additions to the text and plates, and an introduction containing instructions in Microscopic Manipulations.* By HENRY VANARSDALE, M. D. In two volumes. New York: Pratt, Woodward & Co. 1851.

All who are interested in the study of Microscopic Anatomy, and to whom the above work in its English dress, is doubtless familiar, will be pleased to learn that it has been re-printed in this country, and enriched by the additions of the American editor in the shape of an introduction, and many original American and other drawings. We have watched with great pleasure, the growing interest and zeal which have been of late manifested in

this country, in this teeming field, and we refer with pride to the observations of our own micrographers, now beginning to be recognized as authorities all over the world. For many years we have been content to see with foreign eyes and foreign glasses, and to receive as matters of faith, all that has reached us from distant observers. Now we have our own instruments, unexcelled by those of the first English and continental opticians, and our own observers, patient and faithful, upon whom we can rely with confidence for confirmation of all that reaches us. The increasing demand for, and popularity of books upon this and kindred subjects, is the best evidence of the truth of what we have advanced; and in the one before us, we discover what has long been wanting in the English literature of this subject; for the works of Henlé, Lebert, Donné, Robin, Mandl, and others, were "sealed books" to those unfamiliar with the language in which they were written.

One of the main objects of the author of the present volume has been to collect from the various scientific and other journals, the contributions of his own countrymen, and to combine them into a whole, at the same time introducing the labors of other observers, as they served to exemplify the various subjects treated of. Of the American edition we feel that we cannot speak too warmly in praise. It combines all the high scientific characteristics of the original, which are given to us unmutilated, and which render it invaluable to the advanced student in Physiological and Pathological histology, together with an introduction by the Editor, that is admirably adapted to beginners, in which are full descriptions of the different foreign and domestic instruments, and their accessories, the mode of preparation and preservation of objects, together with the fluids used for mounting objects, and the methods of performing this operation; all described in a clear, simple style, that cannot fail to be understood by the merest tyro in microscopy.

It would be a "labor of love" for us to follow the author step by step, through the various departments of the work, did our limits allow, and to exhibit to our readers all that has been done by him and others; but the very nature of the work, in which so much is taught by demonstrative plates, as well as our restricted space, forbid this. We must rest content with the hearty recom-

mendation to all who love the subject, to possess themselves of this admirable work, with the assurance, that their most sanguine expectation will not be disappointed.

One word, as to the "getting up" of the American Edition. It has rarely been our lot to meet a more elegantly executed work, both as regards plates, paper, typography, &c.; it reflects the highest credit upon all concerned. Ten additional plates have been added to the original, together with several wood cuts. The work appears in two volumes, one of which is devoted to the text, and the other to the plates, an arrangment by which the reader is saved the tediousness of turning back to refer to the plates, which must always occur when both are bound together.

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*Homœopathy: An Examination of its Doctrines and Evidences.* By WORTHINGTON HOOKER, M. D. pp. 146. New York, Charles Schribner, 1851.

Those of our readers, who are familiar with the British journals of medicine, must have doubtless been struck with the attention which has lately been bestowed in this quarter on *homœopathy.* The apostacy of one or two individuals, occupying prominent positions in the British medical world, has probably been the immediate stimulus of the interest thus displayed. But the fact is manifest, that our brethren in the British islands are disposed now to deal with the charlatanism in question, as an antagonist which must be seriously and efficiently met. We confess that we have viewed this movement with much satisfaction. It has long been our impression, that the contemptuous indifference with which the progress of the humbug has been generally treated by the profession, particularly with us, has been bad policy. That it has taken a hold upon a portion of the educated and refined classes of society, cannot be denied. And absurd as we deem its doctrines and pretensions, they have rallied partisans whom it is worth while to convince, or at least expose. It is, therefore, with especial cordiality, that we welcome Dr. Hooker's admirable little brochure on this subject.

Dr. Hooker is so well known to the profession as one of our ablest and most judicious politico-ethical writers, that any thing from his pen must at once commend itself to general interest and

attention. The essay before us is "the Fiske Fund Prize Dissertation of the Rhode Island Medical Society," on the subject, "Homœopathy, so called, its history, and refutation." And we may say of it, most unreservedly, that it places our profession under the strongest obligations to the accomplished author. In style, force, and temper, it is truly excellent, and must, we feel, do much good.

Dr. Hooker's examination of homœopathy, crushing as it is in analysis and argument, is, we think, particularly likely to prove useful, from its great fairness and moderation of tone. The author professes to have "no desire to search out its weak points and leave untouched its strong ones, if there be any, but to be willing to meet it at every point." And this is certainly the right way to obtain a hearing among the intelligent and candid, who have adopted the system of Hahnemann, "without a real understanding of its merits." Those who will give Dr. Hooker a hearing, it may be safely asserted, "will be induced to abandon the combination of falsities and inconsistences which this system presents."

In concluding this notice, we ask the attention of our readers to the following remarks in relation to medical fallacies in general:

"Medical delusions, generally, though so diversified in their forms, have a strong family resemblance, and the fallacies of Homœopathy may be considered as the types of other fallacies. An exposition of them, therefore, will reveal to the reader the foundations of other delusions and forms of quackery, and will perhaps enable him so to apply the principles of evidence in medicine, that he may in future the more readily detect error, whether it appear in the garb of learning or of ignorance.

A refutation merely of Homœopathy, without regard to other delusions, or to the general sources of error, would be a comparatively trivial, and almost useless effort. If it should be successful in dislodging this boasted system from its hold upon the popular belief and favor, some other fallacious system would take its place. And if left to itself, it would in a little time pass away, like all other delusions before it. In attacking Homœopathy therefore, we must look beyond this delusion, and aim at an exposure of the common sources of error, if we wish to produce any valuable and permanent effect."

*A Memoir of Samuel George Morton, M. D.* By CHARLES D. MEIGS, M. D., *Read before the Academy of Natural Sciences, November 6th*, 1851.

This elegant biography will be read with the deepest interest by the wide circle of the friends and admirers of Dr. Morton. It is in Dr. Meigs' happiest style, abounding in the genial earnestness and graceful bonhommie, which are so well known as his characteristics, and no less distinguished by erudition, tact, and right feeling. We should take the occasion to extract at length from it, but for the extended notice of Dr. Morton, which appeared in the number of this Journal for June last.

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*A Review of Materia Medica, for the use of Students.* By JOHN B. BIDDLE, M. D., formerly Professor of Materia Medica in the Franklin Medical College of Philadelphia, &c. &c. pp. 322. *With Illustrations.* Philadelphia: Lindsay & Blakiston: 1852.

This little volume is intended as a manual of Materia Medica for the use of Students. There is, perhaps, no branch of medicine in which the absence of elementary text-books, of convenient size, adapted to the subject as taught in our medical schools, has been more felt than in this; and the author has been induced to hope "that a condensed review of the elements of Materia Medica may be found useful, as a guide to the courses of lectures delivered on this department in the United States." The work "makes no pretensions to rank among original treatises, but is designed to present the leading facts and principles usually comprised under this head, as set forth by the standard authorities."—(*Preface, page* 3.)

# THE MEDICAL EXAMINER.

PHILADELPHIA, FEBRUARY, 1852.

## OBITUARY.

Died, on the 21st ult., at his late residence on the Brandywine, Delaware, THOMAS MACKIE SMITH, M. D., aged 42 years, the brother and preceptor of one of the Editors of this Journal.

Few men live who possessed more of the confidence and affection of their fellow citizens, and better deserved these, than the lamented subject of this notice. In the midst of a scattered population, he fulfilled the duties of his arduous profession, with untiring assiduity, and unswerving faithfulness; and by many years of devoted service and the kindest attentions, secured not only high admiration for his medical skill, but the warmest love and gratitude from all who received the benefit of his labors, or were made acquainted with his uniform self-denial and perseverance. A whole community, among whom he has gone in and out, relieving the sick, supplying the wants of the destitute, comforting the afflicted, and showing kindness to all, now rise up and call him *blessed*, and thus show how well he deserved that title, which belongs to so many of his profession—"the beloved physician."

## SYDENHAM SOCIETY OF LONDON.

The first volume of the Society's works for the year 1851–'2, has reached this country. It embraces the "Principles of Physiology" of Unzer; and a "Dissertation on the Functions of the Nervous System," by Prochaska; translated and edited by Dr. Thomas Laycock. It is hoped, that another volume of the Annals of Influenza has appeared by this time in London. The third volume is in press, the fourth of Rokitansky.

## INSTRUCTION IN MICROSCOPY.

Our readers will find in the advertising sheet, the announcement of a course of lectures and demonstrations on the above subject, by Dr. John Neill, Demonstrator of Anatomy in the University of Pennsylvania.

To those desirous of pursuing this most interesting department of Medical Science, we can confidently recommend Dr. Neill as in every respect competent to teach it. It will be seen that the number of the class is limited to twelve.

## MEDICAL NEWS.

HOMŒOPATHY.—A full meeting of the Edinburgh Medico-Chirurgical Society was held on the 19th November, no less than sixty-four members being present. After the transaction of routine business, the following interesting circumstances occurred :—

Professor Syme, in moving "That the public profession of homœopathy shall be held to disqualify for being admitted or remaining a member of the Medico-Chirurgical Society," said,—that in addressing the Society on this occasion, he considered it to be quite unnecessary to enter into a formal refutation of the principles of homœopathy, but before proceeding further, he would exculpate himself from the charge of inconsistency brought against him by Dr. Henderson, to the effect that he had himself countenanced homœopathy in two instances. This charge appeared at the time in the various medical periodicals. Now, regarding this inconsistency as tantamount to a practical falsehood, he (Mr. Syme) took the present opportunity of exhibiting the falsities of the accusation. The cases to which Dr. Henderson alludes are two in number. The fact is, there was a young man who had been under the care of Dr. Nimmo, who had been placed under his (Mr. Syme's) care. Finding that he had been attended by Dr. Henderson, Mr. Syme requested a meeting, not for the purpose of consultation, but to arrange for placing the medical treatment under the hands of another physician—Dr. John Taylor—as Mr. Syme felt that he could not co-operate with Dr. Henderson. In the second case, he met Dr. Henderson, being under no pledge not to do so. This is the whole extent of his countenance of homœopathy. Mr. Syme next stated what he conceived to be the duty of every member of the Profession. As an individual, he had long refused to adopt homœopathy, because he regarded it as mischievous folly. As a member of a licensing board, he would not refuse any candidate who complied with the regulations of the University. If such an one were base enough to disguise his real sentiments in regard to the practice of physic, the disgrace would rest with him and not with the Board. The duty of a Society like the present was, he said, clear. It was a voluntary Association for upholding sound principles of practice, and for elevating professional character. If, therefore, a member departed from the principles of the Society, and placed himself in opposition to them, he should be requested to withdraw from their body; or, if seeking admission, he should be excluded. He trusted the motion would be unanimously adopted.

Professor Simpson seconded Mr. Syme's motion, and alike also defended himself from the charge of meeting homœopaths in consultation, which emanated from the same quarter. Dr. Henderson affirmed that Dr. Simpson had met him in consultation on some cases; Dr. S., therefore, called upon Dr. Henderson to ask what these cases were. It so happened that Dr. Simpson had anxiously attended Dr. Henderson's own wife; but she, with her husband's sanction, was treated on the ordinary principles of scientific medicine, and not homœopathy. In doing this, no one would accuse Dr. Simpson of countenancing homœopathy. Dr. Henderson, however, mentioned two cases,—one of uterine disease, and the other of disease of the labium. Dr. Henderson had, it is true, previously attended them, and had asked Dr. Simpson to take charge of them, but he did not attend them with, or for, Dr. Henderson. In one other case he certainly did meet Dr. Henderson at the bed-side, but this was a case involving an operation, and not internal treatment; but even in doing this much, Professor Simpson was now convinced he acted wrongly; he had erred in going thus far. However, even if Dr. Henderson's statements had been true to a far greater extent, it only proved, that hitherto the Profession had been over-indulgent to him and his heresy, believing, as his friends did, that the delusion would soon subside. But, because they had been over-tolerant, it was no reason why they should continue so. It now became the duty of the Society to make their stand, feeling that every proper consideration for themselves and the noble science they cultivate, calls imperatively for a complete casting off of homœopathic practitioners, as abettors of delusions and errors. Dr. Simpson continued to draw a parallel between these impostors and the brothers in another profession—Joe Smith and the Mormons. These two heresies, the homœopathic and the Mormonite, had in fact many points in common, and even both equally absurd. Some homœopaths profess Hahnemann to have been despised, [Witness the ravings of the clerical witling quoted by Dr. Cormack.—Ed. P. J.] as the Mormonites do of Joe Smith. It is true, we have no standard of faith whereby to test medical opinion, but we have the standard of common sense. Judged by this, Hahnemann's dogmas are a tissue of the strangest contradictions and the wildest absurdities. If a grown up man were seriously to say that two and two make five, he would not be considered sane, as he defies the dictates of common sense. When other grown up men tell the world, that they can cure this or that disease by the billionth or decillionth of a grain of a drug, they express an opinion more palpably absurd than that of him who says two and two make five. If men would reflect what a billion or a decillion really is, they would not be so childishly

credulous. There is no poison so strong that a billionth of a grain would in the least affect a fly, much less a human being. These people tell us, that division of their drugs invests them with "tremendous" power, but one of these "tremendous" billionths will not affect the frailest insect. For what is a billionth of a grain? Why, if a grain of sulphur were divided into billionths, and our first parent, Adam, had, when living, (6,000 years ago,) swallowed one such billionth every second until the present time, supposing he had lived so long, he would not yet have swallowed half the grain. He must work on at the rate of sixty billionths minute for 24,000 years to come to get through the entire grain. Yet, forsooth, these wiseacres believe that a few of these billionths will cure an attack of jaundice. Appealing to common sense, should not such men be requested to withdraw from scientific societies like the present? However, a billionth of a grain is a large dose; some give the tenth dilution or the decillionth of a grain. Little do they reckon what a decillion is. Here is its notation:—1,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000. Now, the world contains nine hundred millions of human beings. If all these nine hundred had lived from the commencement of the world, and each had swallowed every second of their existence a decillionth of a grain, they would not yet have finished the grain. And, say the homœopaths, a few of these decillionth globules of belladonna will cure scarlet fever. One remark of Mr. Syme reminded Dr. Simpson of a curious fact in the early history of homœopathy in Edinburgh, proving on the one hand how far imagination will go, on the other hand, that all homœopathic globules are alike, or rather alike inactive. Some eight years ago Dr. Simpson received a present of a box of homœopathic medicines from an old schoolfellow, who had set up as a homœopathic druggist. During the time it was in Dr. Simpson's possession it was given as a plaything to his son, then a child. The boy amused himself by uncorking the bottles, emptying their contents into a general heap, and then refilling them promiscuously. The effect of this was a complete compounding of the globules of different kinds, by mixing them together. It soon happened that a professional brother calling at Dr. Simpson's took a fancy to the box and carried it off. Many weeks after, the new proprietor of the box met Dr. Simpson, and told him he had been trying homœopathy with the contents of his box, and that he had accomplished wonderful cures. Dr. Simpson enjoyed the joke, and said nothing about the box, until, finding his friend had got deep into the homœopathic mine, and actually published a list of cases, he at length told him of the elaborate mixture the globules had

undergone. This friend is Dr. Henderson !!! In conclusion, Dr. Simpson alluded to those impostors, who, pretending to be homœopathists, prescribed ordinary doses in the guise of globules, and practised either way, as best suited their own pockets and the caprices of the patient. These, he argued, should be expelled from the Society.

At the conclusion of this instructive as well as important meeting, the globulists, Drs. Rutherford, Russell, and James Russell, had the good sense to anticipate expulsion by resigning their seats as members of the Society.—*Provincial Medical and Surgical Journal.*

OBITUARY.—We are pained to record the death of Dr. JAMES CAMERON, one of the oldest and most reputable practitioners of our city. There are few among us who have acquired a more extensive practice, or enjoyed a higher degree of the confidence and affections of his patients, which he retained during a long life. Dr. C. was a native of Scotland, a graduate of Glasgow, and a worthy member of the New York Academy of Medicine. He was deservedly respected, and his loss will be deplored, for he was an honest man.—*N. Y. Med. Gaz.*

Dr. SYDNEY A. DOANE, Health Officer, at Quarantine, Staten Island, New York, died of ship-fever, on the 27th of January.

Dr. JAMES ARTHUR, one of the most distinguished medical officers in the British service, died lately in Cheltenham, England, at the age of seventy.

THE ROYAL SOCIETY OF ENGLAND.—The anniversary meeting was held on Monday, the Earl of Rosse, president, in the chair. His lordship delivered his annual address, after which the Copley medal was presented to Professor Owen for his important discoveries in comparative anatomy and palæontology, published in the *Philosophical Transactions;* one of the royal medals to the Earl of Rosse for his observations on the nebulæ and the second royal medal to Mr. G. Newport for his paper on the Impregnation of the Ovum. The Society then proceeded to the election of council and officers for the ensuing year, and the following noblemen and gentlemen were elected:—*President*, the Earl of Rosse, K. P., M. A. *Treasurer*, Lieutenant Colonel Edward Sabine, R. A. *Secretaries*, Mr. Samuel Hunter Christie, M. A., and Mr. Thomas Bell. *Foreign Secretary*, Captain W. H. Smith, R. N. *Other Members of the Council*, Mr. William Bowman, Mr. Benjamin Collins Brodie, Mr. Charles Brooke, the Rev. Professor Challis, M. A., William Clarke, M. D., Charles Bridle Daubeny, M. D., Sir P. de Malpas Grey Egerton, Bart., the very

Rev. the Dean of Ely, Mr. J. P. Gassiot, Marshall Hall, M. D., Sir John Frederick W. Herschel, Bart., Professor W. Hallows Miller, M. A., Lieutenant Colonel Portlock, R. E., Mr. Edward Solly, Mr. William Spence, Nathaniel Wallich, M. D.—*London Lancet.*

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THE LONDON EPIDEMIOLOGICAL SOCIETY.—On the formation of this Society, application was made by the President, Dr. Babington, to various public bodies for their assistance and co-operation; the fruit of this judicious step is now being realized. The Committee on small-pox and vaccination have deputed two of their members to examine the returns annually made by the medical officers appointed by the various boards of guardians according to the requirement of the Act of Parliament, passed in 1840, "to extend the practice of vaccination." Through the courtesy of the Poor-law Board, every facility for the full examination of these returns has been afforded; and we are informed by the honorary secretaries of the Society, that a large body of the most valuable and elucidative information has by these means been obtained by the deputation. Our readers will be enabled to judge of the importance of these official documents, when we state that they show the total number of persons vaccinated yearly by the public vaccinators in each district of the 631 poor-law unions in England and Wales; giving in separate columns those who are under one year, and those above one year of age, and likewise distinguishing in most instances the successful from the unsuccessful vaccinations, under and above one year. As the number of births in each union is also appended, a certain basis is afforded for determining the exact progress of vaccination in every part of England and Wales, so far as the gratuitous system is concerned. The results are now under the consideration of the gentlemen who have gone over the returns; and although it would be premature at the present moment to state the conclusions to which they point, we may affirm that they promise to constitute one of the most trustworthy contributions hitherto made in this country to the statistics of vaccination.

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ARSENICAL POISONING.—A very interesting case has recently come before the French Tribunals, in which the question arose, as to the possible contamination of a corpse buried in an arseniferous soil. M. Barse, who was ultimately consulted, appears to have shown more than ordinary toxicological acumen. (*Union Médicale*, Sept. 1851.)

A man and his wife were accused, the one of poisoning his former wife, the other her former husband. Both coffins, buried in different cemeteries, were exhumed. The female was in good preservation, the

coffin being intact; the male less so, the coffin being much decayed, and earth being found within it. Arsenic was found in both bodies, but the surrounding earth in both cemeteries was found to contain arsenic also. The chemists were puzzled, but, from the fact that in the coffin of the female no arsenic could be detected in the cerements or other matters interposed between the corpse and the earth, they concluded that it was a case of poisoning.

M. Barse being appealed to, decided that this was the correct opinion, as the native arsenic in the soil was always mixed with iron, cobalt, or antimony, and could not be detected by ordinary reagents. Its solubility would also prevent its reaching the bodies by filtration. To confirm this view, he likewise examined other bodies buried in the vicinity of the two in question, but no arsenic could be detected. He further searched the chamber in which the man died, and finding splashes on the walls and on the floors, which indicated the vomitings of the patient, had the spots scraped carefully, as also other parts of the room, distant from the bed. The former matters contained arsenic, the latter none. The parties, on this, were found guilty.

Death of Priessnitz.—Priessnitz, the founder of hydropathy, died at Graefenberg on the 26th of November, at the age of fifty-two. In the morning of that day Priessnitz was up and stirring at an early hour, but complained of the cold, and had wood brought in to make a large fire. His friends had for some time believed him to be suffering from dropsy of the chest, and at their earnest entreaty, he consented to take a little medicine, exclaiming all the while, "It is of no use." He would see no physician, but remained to the last true to his faith. About 4 o'clock in the afternoon of the 26th, he asked to be carried to bed, and upon being laid down he expired.

The French Revolution.—On Friday, the 5th inst., Dr. Puriss, of the Rue-de-la-Paix, was mortally wounded in the Rue Faubourg Poissoniere, during his professional visits. He received two musket shots, and died in two hours afterwards. In the same room where he was lying, there were also thirty-five dead bodies.

The London Medical Times and London Medical Gazette have been incorporated, and the joint publication has been issued from the commencement of the current year, under the title of the Medical Times and Gazette.

Annual Public Meeting of the Academy of Medicine of Paris. —The Academy held its annual meeting on December the 16th, 1851. A general report was read as usual on the prizes awarded by the Academy in 1851. The subjects of the prizes for 1852 and 1853, were then made known, and M. Dubois (d'Amiens) read a panegyric discourse on Hallé. The prize of the Academy on White Swelling, was awarded to M. Richet, well known for his successful labors on the subject. Madame de Civrieux's prize on Convulsions was not awarded to any of the competitors. A prize on Melancholia only produced an encouragement. Among the subjects for 1853, we notice the following:—"Is there any Paraplegia independent of Myelitis?" The subject of Portal's prize is, "The Anatomy and Physiology of the various kinds of Goitre." Madame de Civrieux's, "The History of Tetanus." Dr. Capuron's, "On the Physiological and Pathological Circumstances of the Puerperal State." The Argenteuil prize, on "The Therapeutics of Stricture," has now accumulated to 480*l.*; it is an hexennial prize, and was not awarded from 1838 to 1844. The Academy prize for 1852 is, "On Ergot of Rye as regards Physiology, Midwifery, and Hygiene." Portal's for 1852, "On the Pathological Anatomy of the Inflammation of Bone;" and Madame de Civrieux's, for the same year, "The Ætiology of Epilepsy: inquire for the indications which the study of its causes may furnish in regard to the preventive or curative treatment of the disease."—*Lon. Lancet.*

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# RECORD OF MEDICAL SCIENCE.

## SURGERY.

*Gonorrhœa.* Dr. C. B. Gibson, (Medical Society of Virginia, November meeting,) made some remarks on the treatment of *Gonorrhœa*, and exhibited an instrument which he learned was in common use in New York, and which he thought would be found useful in cases where it was desirable to apply caustic solution to every part of the urethra. The instrument consists of a silver tube, containing a sliding wire, which is rolled at its end with fine sponge. The sponge may be saturated with any solution, and made to swab out the urethra and touch its entire wall. The instrument was introduced, he believed, by Dr. Campbell Stuart of New York, and he learned that it was very popular.

Dr. Gooch said that the instrument could be obtained from several of the druggists of the city, but that he did not like its construction nor its use. Since the subject was brought up, he would take the occasion to remark, that, having experienced great difficulty in the treatment of this

*opprobrium* of surgery, as Dr. Gibson had justly called gonorrhœa, he had lately given a fair trial to the *hydrastis canadensis* in five cases. He was sorry to report, however, that he had failed in accomplishing *any good whatever* with it. It is an astringent, but has no peculiar virtues, he thought. He was induced to make a trial of it many months ago, by the recommendation of a member of the society, who knew it as an old Philadelphia remedy. Just now, however, almost every medical journal in the United States is copying a short article by Dr. McCann of Ohio, in which he lays claim to originality in its use in this disease. He thought the claim as absurd as the specific.—*Stethoscope.*

## MATERIA MEDICA AND THERAPEUTICS.

*Comparative Value of Cod-liver Oil and Fish Oil mixed with Iodine.*—Dr. Champouillon, professor at the Army Medical School of Val de Grace, has just laid before the Academy of Medicine the result of the comparative experiments he has made upon phthisical patients with cod-liver oil, and simple fish oil mixed with iodine. Dr. Champouillon gave the cod-liver oil to 120 patients laboring under phthisis. Fifty-one were in the first stage; and of these, twenty-four were benefitted, and none died. Thirty-seven were in the second stage; of these, nine recovered, and three died. Fourteen were in the third stage; and here six recoveries and four deaths took place. The author gave the iodated oil to seventy-five patients in different stages of phthisis: no improvement took place in any case, and in several it was noticed that the remedy did harm.—*Lancet.*

*Extraction of Balsam of Peru.*—It appears that there is an error in the account given in the works on Materia Medica, of the mode of preparing *Balsamum Peruvianum* (*Balsam of Peru,*) in Central America. In the last edition of the U. S. Dispensatory, the following description of the process is furnished: "Incisions are made into the bark, which is slightly burned, so as to cause the juice to flow. Cotton or woollen rags are then inserted into the apertures, and after saturation, are removed and replaced by others. When a sufficient quantity is collected, the rags are boiled in water in large jars; and the balsam rising to the surface, is skimmed off, and put in calabashes or bladders." The balsam, however, has a specific gravity of from 1.50 to 1.60, and cannot therefore, float in the water by boiling. This mistake was lately pointed out to Dr. Pereira, (who had adopted the erroneous description,) by Dr. Martius, of Erlangen; and Dr. Pereira, admitting the mis-statement, publishes in the London Pharmaceutical Journal, for November, 1851, the following paper on the mode of producing the balsam, furnished him, by a gentleman from South America, who obtained it "on the dictation of a native Indian."

"The manner used to extract the balsam from the trees, is to make several incisions in the tree, over which they place pieces of old cloth or

rags, which absorb the juice, which, when they observe to be well soaked, they put in water to boil, until the rags have discharged the greatest part of the balsam which they had imbibed. They allow it to settle sufficiently until the water rises, leaving the balsam at the bottom; they pour off with care the water, afterwards filling '*tecomates*' (gourds,) with the balsam, although it is not now very pure. The rags are then put into 'redes' (little bags of cord,) which, when strongly twisted, wring any remaining balsam out of them into the 'tecomates.' When we purchase it, it is necessary to clean it again, because it still contains water and other impurities, which some Indians will mix with it to gain greater weight."

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*Iodine rendered soluble by Syrup of Orange-peel and Tannin.*—M. DEBAUQUE mentions, in the *Journal de Pharmacie* of Antwerp, that he has found means of keeping iodine in a state of solution, when added to mixtures in the form of tincture. The author uses for that purpose, syrup of orange-peel, which answers the purpose perfectly. It was suspected that *tannin* was mainly instrumental in this result; and this was rendered evident by putting a few grains of tannin into a quantity of water to which tincture of iodine has been added, and in which the iodine had of course been precipitated. The addition of the tannin caused the iodine to be immediately re-dissolved. Thus will the syrup of orange-peel be advantageously added to mixtures containing tincture of iodine, and tannin to injections composed of water and the same tincture.—*Lancet.*

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*Use of Tannate of Alumina.*—Mr. Harrison had found the local exhibition of the remedy in question followed by the most satisfactory results. The method of using was to throw into the passage an injection containing from 2 to 10 grains of the salt dissolved in distilled water, the strength of the solution being in a great measure determined by the amount of smarting pain produced. The most advisable method was just to keep the strength of the injection up to the smarting point. He thought it injurious to produce more than a gentle scalding.

Mr. Harrison did not anticipate, of course, equal success in every case, but he generally found the disordered condition of the urethral mucous membrane removed in the course of one or two weeks, in the ordinary run of cases.

On his recommendation, some of his professional friends had employed it in their practice, and from their reports he was supported in his high opinion of the remedial properties of the tannate of alumina. The combination of alumina and tannic acid produced by Mr. Rogers Harrison, was of a dirty yellowish color, and in crystals about the size of those of coarse sugar, and readily soluble in hot water.—*Lon. Med. Gaz.*

## PATHOLOGY AND PRACTICE OF MEDICINE.

*Prurigo of the Genital and Anal Regions.*—Various remedies are from time to time recommendeded in the journals for this disagreeable and obstinate affection. The London Lancet, for December 15th, gives an application of M. Tournié's, as having been used with much success. "The affected spot is to be rubbed twice a day with calomel ointment, (one to two drachms of calomel to ounce of axunge), and, after each application, dredged with a powder, consisting of four parts of starch to one of powdered camphor." We have used a great variety of applications, for the relief of this unmanageable affection, and have derived most advantage from a cerate made of calomel (ʒi), in Goulard's cerate (ʒi.)

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*Hydatids of the Liver Evacuated Externally.*—By M. LAFFORGUE.—A young female, after running rapidly down a hill, was seized with acute pain in the right hypochondrium. The ordinary signs of diseased liver soon supervened, and, notwithstanding the most varied modes of treatment, continued for five years. Her relations, believing that marriage would improve her condition, permitted her, in opposition to the advice of her physicians, to take a husband. The symptoms continued, though the disease did not appear to make progress. Six months after marriage she became pregnant. The symptoms now underwent exacerbation, but were soon mitigated, and the pregnancy advanced to the full term. The labor was natural, and the patient even nursed her child successfully. Finally, after the lapse of a year, her condition became more alarming, and M. Lafforgue was sent for. She was then in the following state:—Extreme emaciation, general blanching, excessive feebleness, impossibility of retaining food, which was rejected by vomiting almost as soon as swallowed, considerable tumefaction of right hypochondrium, descending to the crest of the ilium and transgressing the linea alba, obstructed respiration, orthopnœa. The respiration soon became more and more embarrassed, threatened with immediate asphyxia, the patient uttered stifled cries, demanded air, and seemed at the point of death. Lafforgue, detecting fluctuation in the tumor which compressed the lungs, made with the bistoury, between the eighth and ninth ribs, an opening which permitted the escape of a flood of thick serum. But the incision soon becoming obliterated by the presence of a thick granular matter, it became necessary to enlarge it, and immediately a hydatid, as large as a pear, was evacuated. The discharge was then re-established, bringing along with it hydatid sacs, of various sizes, some full, others completely empty, and with obliterated cavities; those which were so large as to stick in the wound were drawn out with forceps. In the space of a few minutes a vase, capable of holding six pounds of fluid, was filled with hydatids, and with a yellowish serosity of so fetid an odor as to annoy all the assistants.

The patient, after this enormous evacuation, fell into a state of ex-

treme feebleness, the discharge was consequently arrested for the moment. Next day, however, uneasiness and dyspnœa were renewed, the bandage was removed, and a considerable additional quantity of hydatids and of fluid was evacuated. For six days the discharge continued spontaneously, and such was its abundance that it was estimated at twelve to fourteen pounds of fluid, containing several hundred hydatids. Gradually the symptoms disappeared, hydatids ceased to issue from the wound, and the fistula had nearly cicatrised, when the supervention of pains and uneasiness seemed to threaten a relapse. It proved, however, to be a second pregnancy, which led (by the pressure of the uterus) to the complete cicatrisation of the wound.—*Edinburgh Journal, from Journ. de Médecine et de Chirurgie Pratiques.*

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*Case of Paraplegia Successfully Treated by the Ergot of Rye.*—Dr. Gerard, chief physician of the Hotel Dieu, of Marseilles, has published in the "Bulletin de Therapeutique," three cases, where from ten to forty grains of the ergot of rye have cured paraplegia of the inferior extremities. In the first case the paraplegia had lasted four years, in a man of thirty-nine; the ergot was administered in the dose of ten grains per diem, and gradually increased to forty. In three months the man was quite well. The second case refers to a man of twenty-nine, whose affection was caused by intemperance; he was cured in two months by the same means. The third patient, aged twenty-three, had suffered both from paraplegia and anæsthesia after having been much exposed to dampness in Algeria. The cure by the ergot was effected in three months.—*Ibid.*

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*Phosphorus in Beriberi and other diseases.* By W. G. MAXWELL, Esq., M. D., Garrison Surgeon, East Indies.—I have for several years past been trying phosphorus in beriberi, more especially in the early stages of that disease, before organic derangement sets in, and before the rapidly increasing anasarca has advanced too far.

I give the phosphorus in substance, in one, two, three, or more grains at a dose, morning or evening, or oftener, according to the urgency of the symptoms. I make the phosphorus in pills, bruising two grains or more, and then enclosing it in a wafer of dough or crumb of bread. In acute cases I make the pills fresh up at the time; but small pills, made up carefully in this way, will keep for some time. I increase or diminish the dose, as the symptoms become milder or the reverse; the urine flowing in increased quantity is the sign.

In giving the pill I make the patient keep a mouthful of water in his mouth, and the pill being dropped into it, the whole is swallowed at once. When there is want of sleep, and the bowels not fairly open, a full anodyne, with carminative tincture, together with a full purgative, all combined, are given along with the pill of phosphorus. When the motions become luminous the phosphorus can be reduced in quantity. The earlier in the disease the phosphorus is given, the more evident is

action. If any tenderness of the peritoneum has set in, the phosphorus of course cannot be expected to act.

In recent cases of beriberi in young subjects, I have seen the urine increased from a few ounces to thirty pounds in the twenty-four hours after the use of phosphorus. The œdema leaves the cheeks and neck. In twenty-four hours the line can be seen across the sternum, and the patient even says he feels as if a band had been removed from his neck, and he points to the line of relief, which can be traced by the eye. These were young subjects,—eighteen to twenty-five,—and the full dose of anodyne and purgative were given at the same time.

In beriberi the motions are of an excessively green color, exactly like those passed in severe cases of recovery from cholera. It is long since I have considered beriberi and ague allied, and longer still since I could trace a relationship between ague and cholera; and if true, which I have in my works endeavored to show, the conclusion to be drawn is, that cholera and beriberi are also closely allied.—*Lancet.*

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*Tying of the Carotid Artery, followed by Softening of the Brain, and Death.*—The carotid artery has now been tied several times, with perfect success, both in this country and on the continent; but when deligation of that artery for aneurism has been followed by sudden softening of the brain and a fatal issue, the circumstance should always be recorded. Dr. Chopel, a hospital surgeon of St. Malo, in France, lately brought such a case before the Academy of Medicine of Paris. From pressure of the aneurismal tumor, severe pain was experienced by the patient, and Dr. Chopel preferred the ligature to electro-puncture, which latter operation he deprecates very warmly. The author suspects that a tendency to softening or complete *ramollissement* existed before the operation, although no striking symptoms of such pathological change existed. The patient died a few days after the deligation of the artery, with all the symptoms of softening of the brain.—*Lancet.*

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*Diet in Protracted Fevers.* By E. B. HASKINS, M. D.—It is well known to our readers, who have at all kept pace with the advancement of chemico-physiology, that, in the food of man, there are two great classes of alimentary substances, to subserve the wants of the ever changing organism—the *nitrogeneous* and *non-nitrogeneous.* The former being destined for the nourishment of the tissues, whilst the latter subserves, mostly, the purpose, by slow combustion, of the generation of animal heat. It is not denied that, in the process of disintegration, or wasting of the tissues, some heat is evolved, also, that some fat enters into the composition of those tissues, whilst other portions seem necessary to give symmetry to the body and form cushions of support to moveable parts; yet the above classification of alimentary substances, based upon their uses, is regarded mainly as true. It may also be remarked, that that portion of the non-azotized substances, not directly burned off in the circulation, is converted into fat, and deposited in the adipose tissues for future use.

This economical disposition of respirable materials, is beautifully illustrated in the habits of hybernating mammalia—that go into their winter retreats loaded with fat, and come out in the spring comparatively lean. As such animals remain physically inactive during the season of hybernation, of course but little waste of muscular or other vital structures takes place—not more than can readily be supplied by the proteinaceous compounds already in the vascular system.

Now, when a subject enjoying ordinary health is seized with continued fever, but little or no food is required for a number of days; the blood being charged with azotized matter sufficient to supply the waste from tissual disintegration, whilst, in the adipose cells, there is already fat enough for respiratory purposes.

But should the disease continue unchecked, the time arises when food becomes imperative—when the limbs become lean and emaciated, and prostration of strength supervenes. All agree as to the *time* for the more prompt and regular administration of food; but the *kind* of food best suited for this stage seems not to have met with so general an agreement. The diet usually prescribed in such cases is animalized waters, as beef tea, chicken water, &c., and the manner of preparing them is to remove all of the fat as it rises to the surface in the process of boiling. So the patient, it is perceived, ingests nothing but azotized food.

Now what, *à priori*, will be the course of a protracted fever under such a dietetic system? It is clear—the adipose tissue being exhausted of its moveable fat, and no starch, gum, sugar, or other combustible material being furnished to the blood, the oxygen of the inspired air seizes upon the tissues, and the brain, being, perhaps, the most oxidizable, is the most energetically attacked; and as fatty matter enters largely into its composition, no adequate reparation can take place; hence delirium, subsultus tendinum, wakefulness, and other morbid cerebro-spinal activity—phenomena too often witnessed at the bedside, and always portend an unfavorable issue.

This hypothetical view of the pathology of the brain is, in some degree, supported by the fact that post-mortem examinations have failed to detect any constant lesion in that organ; and when congestion or inflammation has been found, it is not violent to presume that it came on as a secondary lesion.

The point in the dietary of protracted fevers, to which I wish to direct attention, is already clear to your mind—that non-nitrogenized substances, as starch, gum, sugar, &c., should be freely administered, instead of the exclusively nitrogenized diet. By thus furnishing respirable materials, the tissues, particularly the *brain*, are protected from the destructive influences of the inspired oxygen. These materials, then, are far more essential to the organism, under such circumstances, than the azotized substances, since, whilst the muscular system is comparatively at rest, the histological elements undergo very slow disintegration, as is exemplified in hybernating animals.

The non-azotized alimentary substances, as is well known, can be rendered as palatable and inoffensive to the sick (oils excepted) as can the nitrogenized. Sweetened gum water, arrowroot-jelly, barley water, and even the gruel of Indian meal are quite palatable and unirritating to the most delicate stomach. To secure, however, all of the possible dietetic wants of the system, they may be alternated with the nitrogenized diet.

In conclusion, I will take occasion to remark, that, in determining a course of practice upon theoretical grounds, great caution is necessary, that we commit no extravagances. We should never, from *a priori* reasoning alone, abandon well-established therapeutic usage. The most that may be ventured upon with impunity, is the modification and correction of unenlightened experience, and the furnishing materials for such blanks as observation has failed to fill up. Ratiocination is too uncertain a guide to be wholly trusted to in the prosecution of an art like therapeutics, based upon *progressive* science. Kept within these restricted bounds, reason performs her legitimate office in the advancement of a profession that can never be purely empirical or rational.—*Nashville Journal of Med. and Surg.*, Dec. 1851.

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*Sesquicarbonate of Ammonia in Lepra and Psoriasis.*—M. CAZENAVE, so well known as a very successful dermatologist, has just published experiments tending to show that sesquicarbonate of ammonia may advantageously be used as a succedaneum of arsenical preparations, in lepra and psoriasis. The salt is mixed in the following proportions:—Half a drachm of sesquicarbonate of ammonia; diaphoretic syrup, seven ounces; take from one to three tablespoonfuls per diem. The physiological effects are very slight, but in the space of about a week the scales begin to fall off; those which succeed are thinner, the patches which give them support gradually fall in, the redness fades after a longer or shorter time, and a lasting cure generally ensues. If diarrhœa, lassitude, cephalalgia, quick pulse, and rapid alternations of heat and cold, were to occur, as was the case with two or three patients, the remedy should be suspended.—*London Lancet.*

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## ANATOMY AND PHYSIOLOGY.

*Muscular Contraction—Cadaveric Rigidity—French and American Experiments, &c.*—It appears that the *Savans* of Paris have been very recently engaged in physiological experiments upon muscular contractility, and cadaveric rigidity, and they seem considerably elated, if not dazzled, by the new coruscations of light which these researches are supposed to shed in the realms of physiology. Whether this be, as it claims to be, a new burst of light, we will inquire into presently. In the meantime we propose to give a translation from a French Journal, narrating these discoveries, as reported by M. Leon Fourcault, on behalf of M. Brown-Sequard, as follows:

According to the opinion generally received, post mortem rigidity, which takes possession of the cadaver some time after the last breath, is

wholly due to the mechanical effect of the coagulation of the blood in the animal tissues. The reasons given, have, at least, considerable plausibility. Among those individuals suddenly struck dead, whose blood preserves its natural elasticity, rigidity of the muscles manifests itself with great force, whilst it is scarcely seen in those who die after protracted diseases, or after copious hæmorrhages,* and still less among those who die asphyxiated by deleterious gases, the specific action of which prevents the coagulation of the blood. This contraction of the muscular system always disappears in advance of decided putrefaction, which destroys the organism, and subjects it to the reign of inanimate matter.

Hence we are readily induced to admit two kinds of death: the one, general, which supervenes first, at the moment when the heart ceases to beat, and which is in some sort only a displacement among the organic wheels of life, the intimate and harmonious action of which constitutes the unity of superior beings; the other variety of death supervenes subsequently in each individual wheel of the organism, as the consequence of the primary variety. Thus the general life may be abolished with the existence of the feeling or sentient unity, while, nevertheless, each organ preserves, during a time, a life of its own, after life proper, the persistence of which sustains itself above, and for some moments contends against the reign of inorganic matter. To this last phase of life cadaveric rigidity belongs, which, so far from being considered as the result of a purely mechanical action, bearing testimony to confirmed death, is, on the contrary, the last manifestation of muscular activity; at the moment of actual death, the muscular functions act for the last time, without guidance or aim, until the vital principle is completely exhausted.

The system of experiment to which M. Brown-Sequard boldly (*audacieusement,*) submits the living organism, seems to us to have been dictated by analogous considerations to those we have enumerated, and the results which he has obtained, favor the opinion that cadaveric rigidity is but life manifested in its utmost or last limits.

Having at first incidentally observed that the parts affected with this *post mortem* rigidity, (the assumed evidence of death,) may, under the influence of sanguineous injections, become again supple, and give signs of irritability, M. Brown-Sequard entertained this particular question, and, on varying his experiments, has arrived at the results which we are about to copy from him: In the dead bodies of rabbits and guinea-pigs, (which become rigid in from ten to twenty minutes,) he divided the aorta and cava, in the abdomen, just above the bifurcation of these vessels—that done, he put into the ends of these divided vessels quills or tubes of glass, and by means of these he connected the vessels of the dead with those of the living animals of the same species, so that the blood of the latter was injected into the arteries and veins of the former, thereby establishing the circulation in the inferior limbs of the dead. This transfusion resulted in the removal of cadaveric rigidity in from

*This opinion is erroneous. The most copious hæmorrhage in the subjects of yellow fever does not prevent cadaveric rigidity.

six to ten minutes, and two or three minutes later, the limbs responded by motions excited through mucular nerves.*

It is then proved by these experiments, that the nerves and muscles which have lost their excitability, may have the latter reproduced by the influence of the blood, and even for a quarter of an hour after *post mortem* rigidity had pervaded and ruled the muscles.

The same result was obtained by operating in another mode more simple and more easily repeated: A rabbit or guinea-pig was divided transversely on a level with the inferior borders of the kidneys—a ligature was applied on the aorta, which suppressed the vascular communication between the two sets of vessels; little by little the muscular activity declined in the inferior limbs, and was replaced, ordinarily, in less than half an hour, by rigidity. After having been abandoned to this state for fifteen or twenty minutes, the ligature was removed, whereupon the circulation was re-established, and then, as in the preceding case, rigidity was removed and excitability reappeared in the muscles and motor nerves.

Finally, in another series of experiments, M. Brown-Sequard investigated the voluntary motions and sensibility, with a view to ascertain whether they might not be re-established in limbs which, without having been separated from the nervous centres, could, nevertheless, be reduced to rigidity from the suspension of the circulation. With this view, he tied the aorta below the renal arteries, in vigorous rabbits; in less than ten minutes sensibility was abolished in the parts below, and in two minutes longer voluntary motion ceased; irritability still continued for nearly half an hour; afterwards rigidity took place, and was allowed to persist a quarter of an hour; at which time the ligature was removed, the circulation was restored, and, as had been expected, the blood brought back voluntary motion and sensibility.

These new researches bear out the following conclusions:

1st. That rigidity in the cadaver does not prove that the muscles are dead.

2d. That the motory and sensory nerves lose in the limbs all power to act where there is no circulation, but recover their functions from the action of the blood.

3d. That the limbs of mammiferous animals, after having been kept for fifteen or twenty minutes in a state of rigidity analogous to that in dead bodies, can be restored to their normal state, that is, to irritability, sensibility, and voluntary motion. LEON FOUCAULT."

The following account, translated by an individual unknown to us, is evidently a continuation of the experiments of M. Brown-Sequard, though the name is spelled differently. We correct the orthography in this particular.

"On the 18th of June, at eight o'clock in the morning, an assassin, condemned to death for murder, was executed at the Barrier St. Jacques. His headless body was given to a celebrated physiologist, M. Brown-Sequard, for the purpose of trying an experiment on the transfusion of

* The exciting agent used was, as usual, electricity.

blood. He had, in operations upon animals, noticed that the muscles which were just becoming rigid, seemed to resuscitate under the influence of fresh blood injected into the veins. The dead body preserved its muscular irritability until seven in the evening, when the stiffness, always consequent on death, seized upon the whole muscular system. As it was too late to obtain blood from the hospitals, and as that of animals seemed to promise but little success, M. Brown-Sequard caused an assistant to make an incision in his arm, from which he took about half a pound of blood. This was passed through a linen cloth, and injected into the radial artery of the subject, a little above the wrist. The corresponding vein was opened, and the natural blood of the dead man, now perfectly black from want of oxygen, was made to yield its place to the fresh blood injected. By continuing the injection, it passed through the capillary vessels, from the arteries to the veins, and flowed up through the orifice cut to allow the old blood to escape. Though it entered of a brilliant red color, it came out as black as the natural blood of the subject. But, being moved about in the air, it soon recovered its red hue, when it was again injected, to be still again disgorged by the open vein. In about half an hour the hand became sensitive, and moved convulsively under the discharge of an electric battery, which previously produced no effect. Out of the nineteen muscles of the hand, twelve recovered their natural irritability, or sensitiveness, and three of them contracted or expanded throughout their whole length. This state lasted from nine o'clock till midnight, when it began to yield to the rigidity natural to all bodies deprived of life. At six in the morning another experiment was tried, but neither the battery nor a fresh infusion of blood excited the least appearance of motion. The experiment seemed to decide, beyond a doubt, that in the human body, as well as in animals, the approach of rigidity may be deferred for a considerable period, by the injection of fresh blood, and that by the further application of electricity, the muscles may be made to move as in the living subject."

In another Journal we have met with a statement showing that the French *savans* regard artificial circulation as restoring to the dead both sensibility and motion, in part, at least. But what is the test used to prove "this high argument?" Electricity! "Sous l' influence de cette circulation et au bout d'une demi-heure, la main de supplicié, par une sorte de resurrection partielle, *redevint sensible et s'agita aux chocs reiteres des decharges electriques.* Cependant tous les muscles ne se montrerent pas egalement *sensibles.*" (See 2d. *L'Illustration, Journal Universel,* Aug. 14th, 1851.)

The fundamental propositions advanced in the above report, so far from being original and altogether new, are comparatively old. It is now a half a score of years since Dr. Bennet Dowler, of New Orleans, not only investigated experimentally, and preoccupied the grounds recently taken by the French *savans,* but a vast deal more, without the aid of electricity, (vulgarly called thunder and lightning.) He has not restricted his experiments to the inferior animals, as dead guinea-pigs

and rabbits, (used by the French physiologists,) nor wholly to vivisections, but has experimented on hundreds of men, women, and children, without the all-powerful, but unphysiological forces generated by electrical batteries.

The general views of life and death presented in the above report, were long since brought forward in Dr. Dowler's essays on contractility, animal heat, capillary circulation, natural history of death, and, in other papers, with copious experimental illustrations. His ideas, and terms, (so far as the two languages will allow,) seem to have been adopted by MM. Foucault and Brown-Sequard, as novelties.

It is unnecessary to allude to Dr. Dowler's vast collection of unpublished researches upon these subjects. Soon after his experiments began, he published various extended monographs with experiments illustrative of the duration, degrees, progress, renewal, and decline of contractility and muscular motion, including the conditions that might be supposed to influence the muscles, as the nerves, the blood, hæmorrhages, the temperature, rigidity, diseases, and under the most varied manipulations and modifying circumstances. The reader and the French savans have only to look into the Medical Journals of Louisville, New York, New Orleans, and of other cities at home and abroad, to be convinced that the news from Paris is old, ("*trop tard,*") and that Dr. Dowler's claims to priority of discovery are entirely indisputable. It is now more than five years since Dr. Dowler, (as he informs us,) forwarded a number of copies of a pamphlet 39 pages, ("Experimental Researches on the post mortem Contractility of the Muscles,") to several members of the Academy of Medicine, and of the Academy of Sciences. Indeed, Dr. Dowler's discoveries in the muscular functions must have been known as early as the 5th of August, 1843. We have now before us a letter addressed to Dr. Dowler from the illustrious Louis, which we are permitted to use, and of which we will give a translation, showing that Dr. Dowler's paper entitled "Post mortem Researches," had been received in that city more than eight years ago. Now, in this very paper is announced Dr. Dowler's discovery of the excitation of post mortem contractility, by percussion, as well as several other discoveries, as post mortem caloricity, post mortem circulation, capillary action, etc., etc.

[TRANSLATION.]

*Sir and honored confrere:*—I know not how to thank you sufficiently for the extreme kindness with which you honor me, in addressing to me the two pamphlets which you have printed; one on pathological anatomy, and the other on what you call sun-stroke.

As to the subject of pathological anatomy, you have done, without doubt, that which no other physician has done till now; for it has been given to no person to make post mortem examinations a few minutes only after death, when cadaveric rigidity (one of the most certain signs of death,) exists, as yet to no great degree. You have been able to see that which few persons have seen—to establish lesions susceptible of changing quickly; and, if you have been able to collect in detail, and

until the last hour of the patients, the symptoms which they have experienced, you will do a thing very useful to science to publish what you have seen.

As to what you call sun-stroke, the medical public cannot but read with a great deal of interest what you say, and, for my part, sir and honored confrere, I dare require you to pursue your researches, in order to have complete certainty that the facts observed by you, or rather the deaths of which you speak, are truly connected with the consequence of of the insolation.

Permit me, in conclusion, to persuade you to continue your valuable labors, to study rigorously the facts which you have collected, as you yourself propose. Have enough confidence in yourself to make them known to the medical public, to whom they will be serviceable, and please accept, sir and honored confrere, the assurance of my grateful and devoted sentiments. LOUIS.

*Paris, Aug.* 5, 1843.

Dr. Dowler's method (percussion) and results are alike original. Physiologists had used, and they still use electricity as the means of exciting muscular action! an agent of great power—one that produces irregular and convulsed motions in dead animals. Sir Charles Bell himself admits that results thus obtained are fallacious: "for the nerves, dead or alive, may convey the galvanic power, like a wet cord."*

It is unecessary to reiterate in this Journal the results of Dr. Dowler'sresearches upon these subjects. It is sufficient to say that he has shown that the muscular force may be repeatedly excited, exhausted, and regenerated for many hours, and even after the appearance of post mortem rigidity, without electricity, and after the removal of the nerves and blood. Cadaveric rigidity is often readily removed by art; and then, in many cases, muscular contractions will follow with perfect regularity, the cadaver raising his arm from the floor to his breast, carrying weights in his hand—after, as well as before the removal of the brain, cord, nerves, and blood.

The French savans have doubtless been deceived, as well in the nature as in the originality of their experiments. They had exhausted, temporarily, the muscular by the electrical force; they then set about injecting the blood-vessels with fresh living blood; in the meanwhile, the regeneration of the muscular force had been progressing, and had the operators injected no blood whatever, but delayed for an equal period, contractility would have returned; for the amputation of a limb, and the removal of the blood and blood-vessels, will not in the least diminish the contractility, though in the living state, Dr. Dowler has admitted that the blood and the nerves may contribute as auxiliary to the inherent forces of the muscles, being rather the essential conditions than the essential agents of motion, both voluntary and involuntary.

We venture to suggest another source of error into which the French *savans* have probably fallen. They tell us that cadaveric rigidity

*New Syst. 180.

having manifested itself in the guinea-pig, blood was thereupon injected, rigidity disappeared, and contractility returned. Now, we incline to think that it was the incidental manipulation of the animal, not the blood, that removed the rigidity; for Dr. Dowler's researches show, that in man, and in the alligator, how much soever they may be mutilated, rigidity may be, by forced motions, removed repeatedly, after which contraction can be excited for hours, and in the latter for three days! The rigidity will take place repeatedly, if the body be left perfectly undisturbed for a suitable time.

Dr. Dowler's researches prove that sensation and voluntary motion may exist independently of the brain. The French experimentalists seem to show that both of these fundamental functions can be revived, for a time, by the transfusion of blood from the living into the dead, even after the *rigor mortis*. We wait for further proof, as the subject is not sufficiently ripe for safe speculation.

Let the French *savans* look at page 54 of the July number of this Journal, where they will see in Dr. D.'s last contribution, a summary statement of the principal laws of muscular contractility, cadaveric rigidity, etc., deduced from experiments commenced eleven years ago.

With respect to this last contribution of Dr. D., (so fundamental, not to say revolutionary, in its bearings,) we may remark, that, judging from sundry letters and from notices of the medical press, so far as we have seen, its reception has been very flattering.

It has been urged as an objection to Dr. D.'s papers and essays, that they are not sufficiently practical in their spirit and bearing. To this we reply, that the writings of Hunter, Harvey, and some others, were looked upon by the less sagacious of their cotemporaries as of little practical utility at the time, and too speculative in their tone for the age; but the lapse of years and the researches of organic chemistry have established as indisputable truths many of these then supposed speculations, and mankind are at this moment receiving the benefits and blessings derived from the experiments of those illustrious minds. So, in like manner, we anticipate glorious results, at some future day, from the untiring labors and ingenious experiments of Dr. D.; and if we cannot apply to practical purposes—to the coining of money—the important discoveries in physiological sciences, which our confrere has from time to time published to the world, we indulge the pleasing hope that another generation will reap the full benefits of his labors, and render homage to his name.—*New Orleans Med. & Surg. Jour.*

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*On the Endosmotic action of Medicines.*—Dr. Cogswell lately read a paper on this subject at the Medical Society of London. After some remarks on the construction of the apparatus—the properties of different membranes to be examined—the well known deductions of Poiseuille, in his Memoir in the "Comptes Rendus" of the French Academy of Sciences for 1844,—the author proceeded to mention his own observations. The endosmometer of Dutrochet consisted of a glass tube, with

a somewhat bell-shaped moveable expansion called the reservoir, having a deep contraction round the middle for securing the membrane. The form of reservoir preferred by Dr. Cogswell was that of a bell-jar with a projecting rim round the larger orifice, the end of the tube and the inside of the reservoir being ground to fit one another. The reservoir had a capacity of eighteen drachms, and an internal diameter at the larger orifice of an eighth of an inch. The calibre of the tube was a fourteenth of an inch. To support the reservoir the tube was passed through a cork adapted to a hole in a leaden plate, which rested on the edge of the outer vessel. This was a glass cylinder, of such dimensions, that, on receiving the reservoir, a quantity of fluid, equal to the contents of the latter, would rise to the neck, leaving sufficient below the membrane. On consideration, the author had been led to adopt, for closing the reservoir, the cæcum of the sheep, as sold in a prepared state by the French, finding, in comparison with other membranes, that it produced the most marked results. The experiments of Poiseuille were then examined in the order observed in his Memoir.

*Action of Purgatives.*—Seidlitz water contained in the reservoir, being opposed to serum, ascended in the tube. Albumen was found in the reservoir, and sulphate of magnesia in the serum. Now, Seidlitz water causes an unusual quantity of albumen to appear in the alvine discharges, and of sulphate of magnesia in the urine. Hence the inference is, that this class of purgatives possesses the property of determining a flow of serum towards the bowels. The author remarked, that it might reasonably be questioned whether serum was a fair representative of the living fluid in the bloodvessels, or its accumulation in the bowels the only physiological effect of the saline purgatives.

*Tolerance of Medicines.*—The author remarked, that endosmose was found by Poiseuille to stop at periods varying for different fluids. The outer fluid being then examined, presents a striated appearance from the incomplete diffusion of the foreign matter introduced in it. After shaking it, there is a renewed ascent of the column; and the same thing happens repeatedly. Poiseuille employed a solution of phosphate of soda and serum. The author repeated the experiment with a solution of the salt, of density 1060, and obtained similar alternations, except as regards the elevation following the second employment of the serum. He left it to be judged, whether the facts as stated would bear out the inference, that the tolerance of medicines arises simply from the circumstance, that "the membranes of the intestinal canal, after being long in contact with the same substance, become impregnated with it, and prevent it from entering so freely into the circulation."

*Influence of Opium.*—Opium and its salts check diarrhœa, and obviate the purgative tendency of other medicines. A solution of one part of nitre to eight of water was opposed by Poiseuille to serum, and produced an elevation in the tube for three quarters of an hour. While the endosmose was proceeding vigorously, the solution was withdrawn, and replaced by a similar one, containing muriate of morphia. After this the ascent continued, but with less intensity; it proceeded for an hour, ceased

an hour, and then the column began to descend. Hence, it is said, the presence of the morphia diminished the endosmose, then put a stop to it, and ended by producing exosmose, such being precisely its effect in promoting extirpation of the bowels. The author, however, believed, that if the experiment had been continued without the morphia, the result would have been nearly the same, as he had found that nitric by itself has but a feeble form of endosmose. To ascertain further whether opium exerts a peculiar influence on membranes unfavorable to endosmose, he had repeatedly opposed an aqueous solution to water, and from it produced much greater effect than some of the inorganic salts. The serum of the sheep inclosed in a reservoir, and opposed to distilled water, containing a grain to the ounce of muriate of morphia, produced a vigorous endosmose for above twenty-four hours. Added to syrup in the same proportion, its effect was not appreciable. He was thence led to believe there was not sufficient ground for characterizing morphia as a substance the presence of which puts a stop to endosmose, and renders the membrane impermeable to either fluid.

*Influence of Tobacco.*—The decoction of tobacco is stated, by M. Poiseuille, to penetrate the membrane, and render it unfit for endosmose. A decoction of four parts of tobacco-leaves to forty of distilled water, was opposed to serum. There was a descent of the column in the tube. However, the density of the two fluids was not stated. The author having made a similar decoction, found that after boiling above an hour, the density did not exeeed 1023, when it was not likely to produce endosmose, with serum having a density of probably not less than 1026. But a decoction of this strength, being opposed to distilled water, produced an elevation lasting for several hours; and further, a decoction of density 1052 opposed to serum of density 1031, produced a well-marked elevation of the column, which was found not to have stopped in twenty-one hours. The author proceeded to state, that having observed a great variety in the endosmose afforded by different solutions of the same density, he tried the following experiment:—Four endosmometers, closed with the prepared cæcum, were filled respectively with solutions of sugar, sulphate of magnesia, common salt, and nitrate of potash, and placed in distilled water; in half an hour the first fluid ascended 1-9 inch, the second, one inch, the third, 2 inches, and the fourth, ·8 of an inch; other membranes afforded corresponding, though less marked results. Thus the common salt was the most energetic at first, and the nitre the least so. But again, the syrup and sulphate of magnesia continued to ascend for several hours, while the common salt stopped in four hours and the nitre in less than two. Syrup, though it has a remarkable power of endosmose, is not a purgative, which Poiseuille accounts for by its being decomposed by the gastric juice. The author then extended the examination to classes of substances. The results obtained were arranged in a tabular form and laid before the Society. It was remarkable, that the sulphates from which experience has selected the most generally useful purgatives, had invariably a strong and continued action, while the class to which nitre belonged was com-

paratively feeble. Chlorate of potash and the iodide and bromide of potassium were among the substances which had the lowest place in the table. Gum and liquors showed a moderate degree of energy, but it continued uninterruptedly for weeks. The author, after entering into some further details, said, he mentioned these as coincidences which might prove useful aids to investigation, but without any view to the formative construction of a theory. From what proceeded, he was lead to the following conclusions:

1. That the division of substances into those which are favorable to endosmose, and those which on the one hand retard and annihilate it, by their influence on the membrane, and on the other render the membrane permeable, or reduce it to the condition of a filter, requires confirmation.

2. That the power of endosmose of different solutions is not regulated entirely by their density, as already observed by Dutrochet.

3. That the purgative salts generally have an energetic form of endosmose, and that this is exerted with more steadiness and uniformity by those which medical experience has selected as most useful in ordinary circumstances.

4. That some of the other substances have marked peculiarities with regard to endosmose, which will probably assist towards explaining the mode of action on the system.

Dr. Lankester thought that the Society and the profession were indebted to Dr. Cogswell for his original and interesting paper. It might not be regarded as practical; but many of the theories discussed by the author had resulted in practical applications. Investigations which proved the erroneousness of old theories were as valuable as those which established new ones. The practical man always has a theory to explain his practice; however disagreeable it was to give up an old theory with its resulting practice, all progress in science and art demanded it.

The investigation of the physical properties of matter had contributed greatly to our knowledge of the functions of life; and imperfect as was our knowledge of those properties of membranes called exosmose and endosmose, it had opened a field of useful inquiry. Dr. Cogswell's experiments showed at least that the theory which explained the action of saline purgatives by their increasing endosmose, was only partially true. They might, however, contribute to the explanation of the action of other medicines. The extraordinary endosmotic power of acetate of ammonia was worthy of remark; and whilst it showed that this power was not alone the cause of purgation, it might throw light on the action of that medicine. He was somewhat surprised at Dr. Cogswell's conclusions with regard to morphia, as the experiments of Poiseuille and Bachetti went to prove that it diminished and even reversed the endosmotic action of fluids in which it was contained. This explanation of its action in diarrhœa was thus rendered valueless. It should, however, be recollected, in reasoning from phenomena occurring out of the body to those taking place within it, how different were the conditions. In the human stomach and intestines we had a living surface covered with cells in a

constant state of developement, and with mucus, which must necessarily modify any endosmotic action, even were that the most prominent function of these tissues. If Dr. Cogswell's paper only led to negative results, it would be valuable as indicating the necessity of caution on a subject on which there had been a good deal of positive speculation.

Dr. Handfield Jones said, that in the paper just read there were two points to which he wished to refer. First,—Certain membranes of a homogeneous character altered the nature of the fluids which passed through them. In illustration of this he instanced the Malpighian tufts of the kidney, and the membrane of the aqueous humor of the eye. This fact was interesting in respect to endosmotic action, which was known to be so greatly modified, in many instances, by the kind of membrane employed. Second,—He referred to the case of the secretion from the kidneys, in which the blood containing the elements of the secretion was on one side of the homogeneous basement membrane, and a layer of albuminous semi-solid matter in the form of epithelium on the other; and inquired whether the elimination of the secretion might not be regarded as an endosmotic action.

Dr. Snow said that, although the subject of endosmosis was a very important one, it did not go far to explain the action of medicines, even of the purgative class. It might occasionally assist in the action of some of the saline purgatives, as Epsom salts, but this medicine would purge when given in repeated small doses, and so diluted as to be much less dense than the serum of the blood. One important point, which it was requisite to bear in mind respecting endosmosis, had been stated by Dr. Golding Bird—viz., that acetate of potash and other salts, when intended to act as diuretics, must be sufficiently diluted to enable them to be imbibed, otherwise they would set up endosmosis into the interior of the alimentary canal, and act as cathartics. Opium probably prevented purgation by diminishing the peristaltic action of the intestines. The theory of its diminishing the permeability of animal membranes would not explain its power of checking diarrhœa, even if correct; for the absorption of fluids taken into the alimentary canal would be retarded, and this would have the opposite effect. In order to understand the action of medicines, a number of other laws must be taken into consideration besides those of endosmosis.

Mr. Chippendale commended the manner in which Dr. Cogswell had conducted his experiments, but thought he had not succeeded in showing that the action of inorganic salts, as purgatives, was the result of endosmosis. In the first place, the fluid found in alvine evacuations was not serum, and if it were a transudation of fluid, as the result of endosmotic action, we should naturally expect that it would take place chiefly through the coats of the stomach, and gradually become less along the course of the alimentary canal. Experience, however, had shown us that purgative salts act principally in the colon. Besides, if serum were really to pass through the coats of the alimentary canal by a process of endosmosis, it would be constantly going on, for the mucus which lubricated the internal surface of the tube was denser than serum. As a striking instance

against the view that purgative action was one of mere endosmosis of serum, he illustrated what took place when a dose of castor-oil was taken. He considered, in conclusion, that purgative salts did not act by causing an endosmosis of serum, but that probably the epithelial cells had much to do with the matter.—*London Lancet.*

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*Observations on the Sounds of the Heart.* By RICHARD BROWN, Esq., M. R. C. S., L. A. C., &c., Cobham.—Few subjects, perhaps, have claimed more attention from physiologists than the one upon which I am about to offer some remarks, and I may add, none in which a greater discrepancy of opinion has been manifested.

Harvey and Haller describe the contraction of the auricles as preceding those of the ventricles. Lænnec conceived that the contraction of the auricles followed those of the ventricles. Turner, Corrigan, Williams, Hope and Bouillaud, have shown the inaccuracy of Lænnec's opinion. Dr. Williams investigated this subject, and his inferences were confirmed by the Committees of the British Association—namely, that the contraction of the ventricles followed immediately that of the auricles.

The first sound of the heart was ascribed by Mr. Carlisle to the rush of blood into the great arteries; by Mons. Rouanet and others to the closing of the ariculo-ventricular valves; by Dr. Hope, to the collision of the particles of fluid in the ventricles; and by Dr. Williams, to the muscular contraction of the heart itself.

The second sound was ascribed by Dr. Hope to the impulse of the blood from the auricles filling the ventricles; by Messrs. Carlile, Carswell, Rouanet, Bouillaud, and others, to the suction of the ventricles, causing the elevation of the sigmoid valves, and to the reaction of the arterial columns of blood against these valves.

The experiments performed by Dr. Williams, assisted by Dr. Hope and others, in order to determine these points, proved that the first sound is produced by the muscular contraction of the ventricles, and that the second sound is caused by the reaction of the arterial columns of blood, tightening the semilunar valves at the diastole of the ventricles.

The first motion of the heart following the interval of repose is the systole of the auricle, which I consider accompanies the diastole of the ventricle; and the systole of the ventricle immediately follows its diastole, commences suddenly, and considerably diminishes the volume of the organ.

On applying the ear or a stethoscope over the præcordial region, two sounds are heard following each other; the first is dull and prolonged, whilst the second is shorter and sharper. The first sound is produced during the diastole, and the second during the systole of the ventricles; and in support of this theory I will briefly state the circumstances under which this opinion was formed.

Some few weeks since, attending a patient laboring under increased action of the heart, and whilst conducting an examination, I could distinctly appreciate the inward current of blood from the auricle to the ventricle, producing the first sound by suddenly distending this latter cavity. The apex of the heart striking against the walls of the chest

in the neighborhood of the fifth and sixth ribs, communicated to the ear at this moment a shock (the heart's impulse.) Immediately followed the second sound, produced by the onward current of blood through the aortic opening, propelled by the contraction of the ventricles. I observed, moreover, that the first sound did not exceed the space in which the impulse was felt, but that the second sound was audible in nearly the whole extent of the chest, which would tend to strengthen the theory I have advanced, inasmuch as the sound produced by the diastole of the ventricle would be circumscribed, whereas that produced by the systole would be diffused.

Whilst my attention was directed to this subject, a case came under my notice in which a *bruit de râpe* was distinctly heard in the second sound of the heart, and over a considerable portion of the chest.

I diagnosed ossification of the aortic semilunar valves and arch of the aorta, believing that during the production of the second sound (systole) the current of blood was passing in this direction. The patient died shortly afterwards, and a post-mortem examination of the body disclosed the correctness of my opinion.—*London Lancet.*

## OBSTETRICS.

*On Relaxation of the Symphysis Pubis after Labor.*—It is not an uncommon occurrence after delivery, to find relaxation of the pubic ligaments; but from the uncertainty of the symptoms developed by it, it is liable to be mistaken for disease or displacement of the womb. M. Marten, (*Gaz. Médicale*, Juliet,) hopes to throw some light upon the subject.

In all patients suffering from this affection, standing is peculiarly painful and difficult, so that the patient can barely walk a few paces even with the help of crutches. They also complain of more or less dysuria, with frequent micturition. If the hands are placed on the ilei while the patient attempts to walk, she will find that the hip of the leg which rests on the ground is pushed up, while the opposite, from contast seems lower than natural.

In treating this accident, M. Marten makes use of a steel girdle, which entirely encircles the pubis. By means of the support thus afforded, he has known a patient walk with ease, who a few days previously could with difficulty stand upon her feet.—*Prov. Med. Journ.*

### RANKING'S ABSTRACT OF THE MEDICAL SCIENCES.

Just as the last form of our Journal was going to press, we received, through the politeness of Messrs. Lindsay & Blakiston, the January number of this most useful periodical, containing a retrospect of the more valuable portions of the journal literature of the last six months. To those acquainted with the merits of this work, we need say nothing in its praise; to all others, we most heartily commend it. Its prompt appearance in its American dress, reflects great credit upon its energetic publishers.

THE

# MEDICAL EXAMINER,

AND

# RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. LXXXVII.—MARCH, 1852.

## ORIGINAL COMMUNICATIONS.

### *On the Organizing of the American Medical Association. Read before the Philadelphia County Medical Society, Feb.* 1852.

By the President, SAMUEL JACKSON, M. D., formerly of Northumberland. [Printed by order of the Society.]

NOTE.—The subject of the following discourse was not discussed by the Society owing probably to the lateness of the hour; but it was ordered to be published and largely disseminated *nem. dissent.* the meeting being very full.

Americans have always considered that government has its just foundation, beginning, and *primum mobile* in the will of the people; and ample experience, both in the general and state governments, has shown that they have not been mistaken. Upon the same principle, every church in the United States, except one, has established its government; and here too, success has demonstrated that wisdom presided at their councils and directed the religious republics. Even the Church of England, when brought to America, suddenly and spontaneously assumed a republican form. It might be said in a metaphor, that transplanted to our soil, it sprang up a beautiful tree of liberty,

bearing flowers and fruits delighting to the eyes and pleasing to the taste of a simple republican people. In England, all power in the church proceeds from the Queen. She nominates the Bishops, they appoint the Rectors, these appoint their Vicars, the people of the parishes being obliged to receive whatever is imposed upon them in the shape of clergymen. In America, on the contrary, the parishoners elect their clergymen, a convention of the clergy and laity elect their Bishop. Thus all power in this church proceeds from the people, as it ought ever to do, when the people are qualified to govern themselves.

In accordance with these illustrious examples in Church and State, the physicians of America ought surely to be governed: that is, by an equal and just representation from their own body. This we cannot doubt is their will and their will ought to be respected and obeyed. The American Medical Association is not a republican institution—it is aristocratical both in its origin and in its continuance. Of this however we do not complain. Its origin was anomalous, but there was perhaps no other way in which a large body of respectable men could be so quickly got together. In all cases of difficulties, dangers, or pressing necessities, that cannot be met or subserved in the regular course of action, some commanding spirits may assume a temporary authority. Thus when the stamp-act required the immediate action of the American people, the Assembly of Massachusetts Bay took measures to have a Congress called from all the Colonies to meet at New York, and ten Colonies obeyed the summons. So when the state of our Profession in America seemed to require that support and protection which the laws denied, the Medical Society of New York summoned a convention which has resolved itself into the American Medical Association.

This has now become nearly *functus officio*, it has acted its part well, it has done its duty, and it is now time for it to prepare for dissolution, in order to be re-constituted in a republican form. It assumed power and has used it well; but now when the continuance of this power is no longer necessary, it cannot be patiently yielded; let the Association then lay it down and grant to the people, or let them assume, their just representative government.

To the continuance of the present system much longer, some valid objections have been made.

The Profession is very unequally represented. The Constitution says—"The Delegates shall receive their appointment from permanently organized medical societies, medical colleges, hospitals, lunatic asylums, and other permanently organized medical institutions of good standing."

Now it happens that in cities, a physician who is a member of several institutions, is elected by them all, and he goes to the Association as a Bashaw with many tails. Sometimes he rejects his supernumerary honors and calls himself a delegate from some favorite institution only. Colleges furnished with five or seven professors, send two of their members, and hence it happens, that the collective colleges in the United States have an over proportion of representation. This has created dissatisfaction, and to a degree apparently over-proportioned to the cause; it resembles too much the election of members of Parliament from the rotten boroughs of England. So when an hospital or any other institution is supplied with only one physician, this one may go every year, to represent himself.

All permanently organized medical institutions of good standing are permitted to send delegates. Now who is to determine whether certain institutions are *permanently organized*, and also, whether they are *of good standing?* "Oh! the Association will reject at its meeting all that do not come within the letter, provided an accusation is brought." Indeed! but this would be a very troublesome procedure and extremely invidious, rendering the accuser almost hateful. It occurred in Philadelphia, in Charleston, and it was on the very verge of giving infinite trouble at Boston.

Again—two or three physicians who would not be received into any Association *of good standing*, may suddenly call themselves a *Society permanently organized*, and then send a delegation. When you hear this new Society announced at the Association, you are ready to cry out like Dido—who is this stranger—*Quis novus hic nostris successit sedibus hospes?* There does not appear any reason whatever that we shall not see a delegation to Richmond from the female medical college. Nay, it is highly probable that next May will exhibit such a monstrous medical

phenomenon as will leave nothing worse for posterity to gaze upon.*

It has been strongly objected to the present constitution, that a very small proportion of the physicians of the United States can ever become members. The Association has now been continued through five annual meetings, and it does not number 920 both living and dead. Many of these have attended every meeting, and not a few will continue to attend every year as long as they live; partly because they are connected with colleges, hospitals, and other associations, each consisting of a small number of members. Some plan, it has been thought, ought therefore, to be adopted for rendering the institution more catholic, by which every respectable physician in the Union may attain membership.

One great object of the Association is to render the profession more respectable by improving its individual members; for in every great body of people, as clergymen, lawyers, and physicians, however high their pretensions, there will always be found some who are hardly worthy of fellowship. Now if there are any means of tempting these people to improve themselves, it consists in firing their ambition. Hold out to them the hopes of a fellowship in the great Association, and they will soon prove themselves worthy thereof. When they have the watchful eyes of the County Society upon them, they will improve daily in all good properties and qualities.

Not a few members of the Association hold themselves forth as such in the title pages of their various publications; now if this membership exalts even authors and teachers in their own estimation, how greatly will inferior men be delighted to have it known in their villages, that they too have been favored with this enviable distinction! Thus in a village, where every one knows the history and present state of his neighbor and where no dereliction can pass unnoticed, a physician will not rest night or day till he render himself worthy of a membership in the County Society; for admission to this, according to the plan we are about to propose, makes him at once a member of the great Association of American Physicians.

* Nil erit ulterius quod nostris moribus addat
Posteritas—— *Juv. Sat.* i.

The admission of members *by invitation*, is thought highly objectionable. *Delegates* are sent to transact the business of the American physicians; to them and to them only it ought to be confided. Suppose Congress or the State Legislatures had permission to invite some favorites into their body, with the privilege of declaiming and voting, what think you would be the result? Moreover the inviting of these members is an invidious thing. Some will be admitted and some rejected, sometimes through ignorance and sometimes through caprice, or something worse. I have seen the most worthy rejected and the most unworthy admitted.

The privilege granted to what are called *permanent members*, of attending all subsequent meetings and partaking in the debates, is a monstrous anomaly and an outrage on common sense. Grant to ex-members of Congress the same privilege, and when think you would their debates find an end? Moreover, a man who is a delegate this year, may soon be turned out of his society for misconduct. How would you feel in meeting him at the Association as a permanent member?

The organization to be now proposed is this:

1. Let the Association be composed of Delegates from County Societies only.

2. Let every man receive, as soon as he is elected into his County Society, a diploma, testifying that he is a member of said County Society, of the State Society, and of the American Medical Association. He is then one of the great body of the brethren in the United States; he is ready to be elected a delegate whenever his fellows see fit to elect him; he is ready to give his vote in the election of others; he is now a member of the great medical republic of his country. He therefore values his diploma from the County Society more than that from the University; for the latter only testifies that he is a Doctor of Medicine, the former makes known that in addition to this, he is now a respectable citizen, a practitioner in good repute, and a member of the American Medical Association. Tis true, he may never be made a delegate, time and chance happeneth to all men; he may not even desire this honor, but he is not less a member of the Association because he may never sit in their meetings. We are not less citizens of the United States because we have not been dele-

gated to Congress; we are citizens of Pennsylvania, contributing to and partaking in its government, though never deputed as legislators. We are Episcopalians, Presbyterians or Methodists, as soon as we are formally admitted into these churches, though we may never be sent to their Conventions.

Do you call this nothing? But all others consider it of great importance to their happiness. See how eagerly the young man of 21 years runs to the polls; see how impatient are foreigners for naturalization, that they too may vote for legislators, when they have no hope of becoming such themselves. The members of County Societies may give their instructions to their delegates; this little privilege is highly valued in politics, why should it not be in medicine?

On the plan now proposed, all power proceeds from the people, that is from the medical public. This accords with our political system; it accords also with our religious system, except in the *Mother Church.* The very essence of this church is to be unchanged and unchangeable, hence it cannot accommodate.

The advantages of our plan are many and more than can be now set forth. The government of individuals would be more perfect. This would devolve upon the County Societies. Each physician, except in large cities, is intimately acquainted with every medical man in his county, and thus all are qualified to judge whether A B or C ought to be admitted or rejected. They are also best qualified to ascertain who is fittest to be sent to the American Association. The County Societies then with open eyes will be the most desirable portals to the medical profession; and their triune diploma will prove a draft for respect and consideration wherever presented.

This organization would annihilate at once all the inveterate jealousy of the schools that now exists in the Profession, by putting all men on a perfect equality in respect to their representative rights. The Professors would be elected Delegates with regard to their talents and learning, and not as at present on account of their fortunate station.

It is of primary importance, to add to the respectability of the County Societies—this would be done by securing the attendance of the *magnates* in the profession, and causing them to take a hearty interest in the business. These Societies are the *Alpha*

and *Omega* of the government of individuals, they are the outposts of the profession, and every means of rendering them respectable ought to be used. Our great men, finding no other portal to the State Society or to the great Association, would attend them more faithfully, and greatly add to their popularity and usefulness.

We should avoid all the confusion and troublesome collisions that now obtain in the election of Delegates. It often happens at present, that the same men are elected from several different institutions of which they are members, as Universities, Hospitals, Colleges, and various societies; now to avoid this unjust accumulation of honors on a few general favorites, much trouble must always be incurred.

The organization proposed would prevent delegations from all unworthy societies. Under the present constitution, as observed above, a few men, two or three, who would not be received into any respectable Society, may suddenly coalesce and send a delegate, with whom you would not be willing to act in a committee.

Dr. Yardley, seeing clearly the many and weighty objections to the present constitution of the Association, brought before our Society, about 12 months ago, a resolution, that it ought to be composed of Delegates from County Societies only. This passed after being considered at three meetings, but with an amendment including delegates from State Societies also. A committee was appointed to lay this resolution before the Association. This was done and a committee of five was then appointed by the Association, and instructed to report at next meeting "whether, to use their own words, some more equitable plan of representation cannot be adopted." To this committee, on motion of Dr. Yardley, the resolution of our Society was referred; so that the subject will be agitated at the meeting in Richmond. To this please to add, that our same resolution was brought before the State Society and almost unanimously approved.

This was a great step towards a reform which might possibly answer nearly all the good ends in view, but it labours under a very troublesome impediment, that of including delegations from State Societies. It is the custom in these to appoint a committee for the purpose of nominating officers and delegates for the coming year—suppose one committee man to be appointed

from every county, (and this is the custom) what would he do but recommend for delegate some particular and favored friend? Thus you have a delegate to the Association appointed by one man when he ought to have been appointed by a majority of the whole County Society. There would moreover be some danger from mutual favors among the committee which has got the odious name of log-rolling.

Another trouble would be, that the same man might be elected both by the State and County Societies. It is clear that the avoiding of this would give infinite trouble.

It has been thought by one of our number and perhaps by others, that the Association should be composed of delegates from State Societies only, as more likely to secure a dignified representation.—To this, it may be objected as above, that the members, not having a full knowledge of each other, might often elect those whom they did not know; that each man of the nominating committee would recommend a friend; that mutual favor would introduce the odious log-rolling; that hence a delegate would be elected by a single man instead of a whole County Society.

It would moreover prove very unsatisfactory to a republican people. It is the mode of electing Senators and President, which long since became odious to a majority of our people. This method of electing, to borrow a simile from Swift, is a tag from the aristocratic scarlet coat of John Bull; but on our plain republican garment, it is considered by many as a hideous patch. It must be known to you all, that a bill for changing the constitution in respect to this point, is now before Congress. Whoever would prefer the State Society in the election of Delegates, must entertain the opinion that physicians are not capable of self-government. They must think with an Englishman who once said to me with a sorrowful face—"Oh Doctor, these republican governments were made for men as they ought to be and not for men as they are." Now this comes precisely to the point—physicians approach nearer to what they ought to be than any other people on the earth, and are therefore worthy republicans. Only make the County Societies respectable and they will enforce the edicts of the Association in the most distant regions of America. Of what avail are all these edicts unless there be sub-

ordinate authorities to enforce them and carry them to the door and to the bosom of every individual? Congress might make laws every day of their lives, but they would be mere *fulmina bruta* without various organs to execute them.

It has been objected that, by excluding the schools you would shut out many of the most vigorous intellects in the profession. This objection is mere wind or mere words, like Hamlet's letter. Cannot these noble spirits join the County Societies and attend to the duties thereof? The professors are men of business, accustomed to public speaking and debate; their station commands respect; when they come to this floor upon a nominal equality with us, we do not envy them; nay, we are pleased with their condescension, and if they attend faithfully to the business of the Society, we shall prefer them. They have never failed in this house to be elected delegates to the State Society, and they would have been elected also to the Association, but they rather chose to go from their schools.

If it be objected that such an extensive revolution is difficult, I would answer—no. The work would be almost infinitely divided, and among so many that it would be found an easy task. Only let the Association give their fiat and the work will soon be done in all its parts through the whole United States; for it is principally a work of words, in which the American people are said to find great delight. If the Association decree, that in the year 1854, this change shall be made, they will find it done at their bidding. The mere beauty of this universal government would stimulate to the speedy establishment thereof. Who would not rejoice, whose heart would not be gladdened, to see this great empire covered and served by educated physicians, all yielding obedience to one symbol of ethics and to the triune government now proposed.

Gentlemen, it has accorded better with my feeble abilities to give you *hints* rather than *reasonings*, and this you must have perceived in the present discourse; but if you will give your minds to these hints, they will prove *words to the wise* and lead you into further and convincing ratiocinations.

*Fractures of the lower end of the Radius, and on their Management.* By H. Bond, M. D., Philadelphia. (Read before the Philadelphia College of Physicians and published in their "Transactions.")

I ask the attention of the College to some remarks upon fractures of the radius, especially to those which occur near its carpal extremity. These injuries have a strong claim to our attention, both on account of the *frequency of their occurrence*, and on account of the *imperfect success* so often attending their treatment.

According to the statistics of M. Goyraud, these constitute one-third of the whole number of fractures. Dupuytren assigns to them, if not always the first, at least the second or third rank in point of frequency. Vidal declares that the fracture of the radius is certainly more frequent than that of any other bone. According to reports of cases in the Hotel Dieu, Paris, for four years, they constituted one-tenth of all the fractures.

The statistics of the Pennsylvania Hospital, by Drs. Norris and Wallace, do not furnish the desired information on this subject; for they only report the fractures of the arm, without even discriminating between the arm and forearm. More precision in classification would have much enhanced the worth of these very valuable statistics. But it was not in their power to remedy defects in the records of the institution. The number of fractures treated in this hospital from 1751 to 1800 was 197, of which 34 were of the arm, which is about 17 per cent., or a little more than one-sixth. From 1800 to 1829, 868 fractures, of which 200 were of the arm, which is about 23 per cent. From 1830 to 1839 inclusive (10 years) 946 fractures (exclusive of a few cases of ununited fractures, where the part affected is not specified,) of which 250 were fractures of the arm, which is more than 26 per cent. [See *Amer. Journ. Med. Sciences*, xxiii. 260; i. new ser., p. 324.] It is probable that at least one-eighth, if not one-sixth, of the whole number were fractures of the radius.

The relative frequency of these accidents in any district will vary according to the pursuits of the people, and according to the climate and season. A storm of sleet, covering the streets

and fields with ice, seldom fails to produce numbers of such cases; I am informed that one storm of this kind, not long since, besides the cases occurring in private practice, brought nine cases of fracture of the forearm into the Pennsylvania Hospital.

In a note at the end of the "Remarks on Fractures," by Dr. Peirson, is an elaborate report of the cases of fracture admitted into the Massachusetts General Hospital, from 1821 to 1840. This report exhibits a remarkable variation, in regard to the relative frequency of the fracture of different bones, from other reports that have come under my observation. It deserves an explanation by the officers of that institution.

The following is the summary of the cases detailed.

"A table showing the proportionate number of cases of each bone fractured in 367 hospital cases.

| | Cases. | |
|---|---|---|
| Fractures of the Tibia and Fibula | 95 | |
| " " Femur | 69 | |
| " " Tibia singly | 38 | |
| " " Fibula singly | 20 | |
| | — | 222 |
| " " Humerus | 18 | |
| " " Radius singly | 9 | |
| " " Radius and Ulna | 6 | |
| " " Ulna singly | 4 | |
| | — | 37 |
| " " Cranium | 19 | |
| " " Clavicle | 26 | |
| " " Ribs | 24 | |
| " " Cervix Femoris | 10 | |
| " " Sternum | 2 | |
| Miscellaneous cases: Scapula, Cervix Humeri, Carpal and Tarsal Bones, Condyles, Olecranon, and Acromion Processes | 27 | |
| Total | 367 | |

"This table shows there are six times as many fractures of the leg and thigh as of the arm and forearm; fracture of the leg being the most frequent accident, then the thigh, then the forearm, and lastly the arm."

As to the success attending the treatment of fractures of the radius, I have met with no statistical reports entitled to consideration, and I think we shall in vain search journals, hospital reports, monographs, and systematic works, for an accurate report of a series of such cases. There is a good reason for this; for, as I believe, few or no practitioners could render such a report, if made with minute fidelity, as would be flattering to their skill, or speak well for the perfection of our art. According to my observation, there is no fracture, except the neck of the thigh bone, where there is so often a failure to accomplish a perfect cure, as that of the lower end of the radius. Practitioners may tell us that, although they have often *seen* deformed wrists, and rigid or anchylosed hands, *they* have had good success—have always cured; yet a critical examination of their cases would often show that there remained either more or less deformity of the radius or the wrist, a more or less complete loss of the use of the hand, or an extremely tedious recovery, much more tedious than occurs ordinarily in other factures.

To show that I am not dealing in exaggerations, or offering opinions unsustained by the observations of others, I cite two very good American authorities. Dr. Peirson, in the work already referred to, says, "Notwithstanding the greatest care in the adjustment and treatment of fractures of the forearm, many instances of deformity will occur. Our pathological museums present an immense variety of irregular consolidations of the radius and ulna, which must have seriously interfered, during life, with their appropriate functions." In a very valuable paper of Dr. J. Rhea Barton, published in the *Medical Examiner* for 1840, he says, "I do not know any subject on which I have been more frequently consulted than on deformities, rigid joints, inflexible fingers, loss of the pronating and supinating motions, and neuralgic complaints, resulting from injuries of the wrist and the carpal extremity of the forearm; one or more of these evils having been left not merely as a temporary inconvenience, but as a permanent consequence."

It may be asked, are these unfavorable results, so opprobious to the profession, inevitable? or may they not very often be attributed to a defect in the manner of treating them? The deformity is, I believe, almost always unnecessary. The fragments

are generally without difficulty placed in apposition, in their normal relation to each other; there is no powerful counteracting force tending to derange them, when the hand is kept in a position to put the muscles in repose; and the deformity results either from the inadequacy of the apparatus, or from defective skill in its application. There may be a few comparatively rare exceptions to this, as where the lower fragment of the radius is crushed, and when this condition is complicated with a fracture of the ulna. But there is an evil, as clearly specified by Dr. Barton, frequently succeeding these fractures, which is a much greater calamity to the patient than any slight or moderate deformity of the radius or wrist. This is a stiffness, inflexibility of the hands and fingers, which destroys their use or impairs it in proportion to the rigidity. This rigidity is sometimes unavoidable, as in cases where there has been severe contusion of the soft parts, and when occurring in elderly persons of a rheumatic or gouty diathesis.

I propose to examine the mode of treating these fractures, as now commonly practised in our hospitals, and as taught by the most recent American and English authors.

It is unnecessary to state in detail to the members of this College what this practice is. I may briefly say that it consists in the use of two long straight splints, with compresses or cushions, and bandages. The palmar splint extends from the elbow down to the extremities of the fingers. Some, however, do not allow this to extend below the second joints of the fingers. The dorsal splint extends sometimes only to the extremity of the metacarpe. When this dressing is applied, the longitudinal axis of the forearm will be continuous, or parallel, with that of the hand.

There are several objections to this mode of dressing the fracture, which I will attempt to point out. In the first place, it violates what ought to be regarded as a surgical canon in the treatment of fractures, viz., to adopt such a position as will put all the muscles, acting on the part, as much in repose, as free from tension, as possible; so that the least counteracting force will be required. 2d. The constrained position of the hand demands tighter bandaging, in order to prevent derangement of the fragments by paralyzing or subduing the muscles that are rendered tense by the position assumed. 3d. This constrained

position and tight bandaging greatly increase the danger of that protracted or permanent rigidity of the hands and fingers which is a too frequent result of those injuries. 4th. This mode of dressing, by long, straight splints, not only increases the danger that it will result in rigidity, but that, when it does occur, the hand will be left unsightly, inconvenient, or useless. 5th. There is another objection to it, which will be regarded by the surgeon as of more or less importance, according as he is actuated more or less by the feelings of humanity. I refer to the distress or discomfort which must result from a constrained position and the force applied to maintain it.

The muscles that act on the hand are least tense, or most in repose, when the hand is inclined backwards, so that the metacarpe forms a considerable angle with the forearm,* when it is also inclined inwards towards the ulnar side of the arm, and when the fingers are moderately flexed. In this case it will be perceived that the longitudinal axis of the forearm, if prolonged, would not correspond with that of the hand, but would pass through, or very near, the point, where the thumb and index finger most easily and naturally meet. Thus in the innumerable manipulations with the thumb and fingers (as with a pen, pencil, button, needle, money, &c. &c.,) their points most easily and naturally meet in this axis of the forearm. This will be found to be the position of the hand, when it hangs by the side with all the muscles relaxed.

This consideration is of little comparative importance in the case of young persons, and of those who have followed no laborious handicraft; but to persons advanced in life, and to those whose muscles and joints have become rigid by hard labor, and to whom the hand is the means of subsistence, it is a point of very material importance. A large portion of these fractures occur among such patients. When such a hand is firmly swathed by a roller upon the long straight palmar splint, it is forced into a constrained position, and some of the muscles, acting on the fragments, are put into extreme tension. This condition of the muscles must act strongly on the fragments of the radius, and must tend strongly to derange them, especially when the fracture is oblique.

*Malgaigne calls this *la flexion habituelle de la main en arrière.*

To counteract this tendency to displacement of the fragments on account of the tense condition of the muscles, the bandage with the compresses must be applied so tightly as greatly to increase the risk of that frequent ill success so well described by Dr. Barton.

When the hand is placed in the position above described, so as to take off tension from all the muscles, there will be so little tendency to displacement of the fragments, that a very gentle pressure of compresses and bandages will be adequate to maintain them in their proper relation to each other. The dressing may be removed earlier, so as to give motion to the hand and fingers, without danger of producing derangement of the fragments, and the gentle pressure of the dressing will be less likely to deprive the tendons and sheaths of their lubricity, and thus to cause permanent adhesions.

There are cases, as before observed, where such violence is done to the bones and soft parts, especially in elderly persons of a rheumatic or gouty diathesis, that it may be impossible to avoid permanent adhesions and rigidity. In such cases, if the usual authorized mode of treatment be adopted, the result will be a most awkward, unsightly, useless member.

But if the hand can be placed and retained in the unconstrained natural position above mentioned (to say nothing of the better chance of escaping permanent stiffness,) *in the first place*, the unsightly deformity will be avoided; and in the *next place*, the hand will not entirely have lost its uses. For the hand, thumb, and fingers being placed very nearly in the position of their most frequent uses, the interossei, the lumbricales, and the several short muscles of the thumb will, by causing only a very limited motion, enable the hand to perform very many of its useful functions.

I can say with confidence, not only from *à priori* reasoning, but from some experience within the last few years, that the dressing of a limb on the principles here inculcated, will very materially conduce to the comfort of a patient. I shall here make no comment upon what is said about paralyzing the muscles by tight bandages, nor upon the power of the body to accommodate itself, by a very painful discipline, to very distressing necessities.

The importance of the position of the hand in the treatment of fractures of the radius has been fully recognized for a long time by eminent surgeons. In these cases, Mr. Cline did not allow the splints or the sling to extend below the wrist. His object was to let the hand, by its own weight, and without any impediment, incline towards the ulnar edge of the forearm; and while the ulna acted as a counter-extending force, this inclination of the hand would prevent the fragments from overriding or overlapping each other, and make it very easy to keep them in apposition. He understood well the mechanism of this accident. When the radius alone is broken, the ulna affords all requisite counter-extension; and in proportion as the hand is inclined towards the ulna, will the lower fragments be drawn down, so that there will be hardly a chance for one fragment to overlap the other; certainly there will be little difficulty in keeping the fragments in apposition with very gentle means. But Mr. Cline's method of dressing, in order to accomplish the indication, was too indeterminate; he could not depend upon maintaining steadily the same degree of inclination of the hand, and one might suppose that there would be danger of producing artificial joints. Nevertheless, I am persuaded that, with Mr. Cline's method of treatment with short splints, there would be fewer cases terminating in deformity and loss of the use of the hand, than when the arm and hand are tightly swathed in long straight splints.

Sir Charles Bell long ago inculcated the importance of the inclination of the hand in the treatment of fractures of the forearm, and he has given a plate illustrating his opinion. Boyer is very explicit upon this point. He says, "the extension should be made by inclining the hand towards the ulnar edge of the forearm." Yet this obvious principle and this explicit direction are wholly disregarded in the present usual mode of dressing with long straight splints and tight bandages. Dupuytren, whose lectures on this subject should be studied by every surgeon, devised a splint—his *attelle cubitale*—with the special object of maintaining this inclination of the hand towards the ulna. Notwithstanding this great man devoted such deep attention to this subject, there were serious defects in his apparatus, which have been pointed out by subsequent French writers.

I have attempted to devise a mode of dressing these fractures, having reference to the principles advanced in this paper, and that will meet the following indications:—

1. To maintain such an inclination of the hand upon the forearm as shall most effectually relieve the muscles from tension, or put them in repose.

2. To maintain the hand and fingers in a position that, if rigidity should result, the member shall be as little an incumbrance, and retain as many of its uses, as possible.

3. To make it easy of application, requiring no extraordinary skill or dexterity, and little liable to be deranged or displaced.

4. To make the dressing easy and comfortable to the patient, while it does not lack efficiency.

My own experience of its use, within the last three years, convinces me that I have to some extent accomplished these indications. How far this shall be corroborated by others, can be known only when others shall have had time, opportunity, and disposition to test it.

To enable others to test the principles herein maintained, in the mode of treating these fractures, I offer the following directions for preparing the dressing, with some explanations as to its application:—

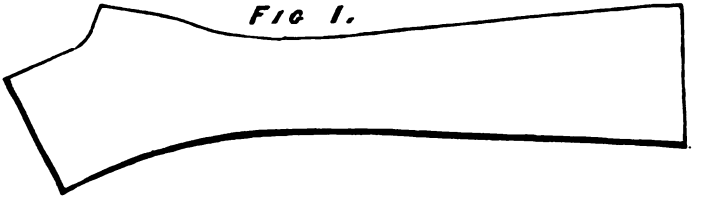


Fig. 1. A board cut to correspond with the profile of the forearm and hand.

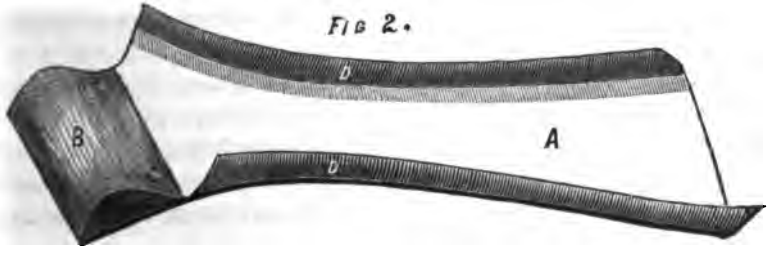


Fig. 2. *A*. This whole space down to the *palmar block* (*B*) to be covered with pasteboard. *C*, *C*. Parts of the block, which must be more or less cut away, to suit the prominences of the hand. *D*, *D*. The projected and elevated edges of the pasteboard.

1. With a light board, of proper thickness for a splint, take a profile of the well forearm and hand of the patient, placing the hand in its habitual inclination towards the ulnar side of the arm, and extending the profile from the elbow downwards, so that it shall reach the second joint of the fingers on the inside, when these are moderately flexed—as much flexed as they are when the points of the thumb and fingers are brought into contact. The lower end of the board must be cut off obliquely (at an angle of fifteen or eighteen degrees) in a direction corresponding with that of a body grasped in the hand, when the hand is inclined to the ulna, as above indicated.

2. Cover the board thus prepared with sheeting, or other strong fabric. This may be done by winding around it, from end to end, a narrow rolling bandage, covering all of it as nearly as may be, with few or no duplications. This is the most expeditious method. A neater one is to cut a piece of sheeting, of the general form of the board, but extending beyond the board on every side, and fastening it upon the board either by a few stitches, drawing towards each other the overlapping edges, or glueing down those edges upon that side of the board which is to be towards the arm, and which edges are to be covered with the pasteboard.

3. Prepare a block of soft, light wood, from seven-eighths to eleven-eighths of an inch thick, and from two to two and a half inches wide, according to the size of the patient's hand, and of a length corresponding with the width of the board in the palm of the hand. This block is to be carved and rounded, so as to adapt it to the form of the hand, and make it easy for the thumb, and in the grasp of the hand when it is placed on the board. It is to be fastened there by screws or nails, so that the remote edge of it shall correspond exactly with the lower oblique end of the board.

4. Upon that part of the board not covered by the palm-block, fasten, by means of small carpet tacks, a piece of book-binder's pasteboard, extending on each side beyond the edges of the board about an inch. If the pasteboard be very thick and stiff, make a slight incision in it along the edge of the board, in order to bend more easily the two projecting portions of it, thereby making a kind of box for the lodgment of the arm.

It seems to me that this splint, or one constructed on the same principles, will meet the above-mentioned indications in the following manner: *First.* The form given to the board retains the hand in its habitual inclination towards the ulnar edge of the arm, accomplishing the object aimed at by Dupuytren's *attelle cubitale*, with as much certainty, with more simplicity, and more comfort to the patient. *Second.* The palmar block retains the hand in its habitual inclination backwards, and it gives the fingers that moderate flexion which most relieves the muscles from tension, and likewise that position which, if stiffness should result, will not only save the hand from a most inconvenient, ungraceful deformity, but will reserve to it the power of performing very many of its most frequent and useful functions. In addition to these advantages, this block contributes much to the comfort of the patient. *Third.* The object in covering the board with a strong fabric, as above described, is to retain the bandage with certainty in its place, without applying it with a dangerous tightness; for, by fastening the roller to this covering with pins, the surgeon need never have his patience tried by finding his dressing deranged, at his next visit. I can speak with confidence on this point, from having used it repeatedly in cases where this quality was fully tested. *Fourth.* The pasteboard is not an essentially necessary part of the splint, but it will be found to contribute to the comfort of the patient and the convenience of the surgeon.

The requisites for dressing with this splint are flannel or other soft fabric, to cover or line the inside of the splint; two compresses; a roller; sometimes, but not always, a dorsal splint.

The flannel or other fabric with which the splint is lined should extend a little beyond the edges of the pasteboard, and the same piece may be extended over the palmar block; but it will be better to cover this block with a separate piece. For this purpose, take a piece of flannel large enough, when it is doubled, to cover the block. Through the doubled edge, with a proper needle, carry a small string (such as ligature-twine,) and tie this around the splint immediately above the block. The covering of the block thus applied may be conveniently changed, without removing the arm from its bed.

Two compresses will generally be required: the anterior or

palmar, and the posterior or dorsal. The proper construction and application of the former of these are a most important point in this dressing, and certainly not less so when long, straight splints are employed; and deformity of the radius or wrist will most frequently result from negligence or want of skill in its use. If the compress be deficient in thickness, and the bandage be applied with its usual tightness, there will not fail to be either a curvature forwards, or a sigmoid flexure, which are the usual deformities. If the thickness of this compress be excessive, there may be a curvature backwards, which I think seldom occurs; but there will be such undue pressure by such a compress as to increase the danger of adhesions, and to aggravate the discomfort of the patient.

I consider this point so important that I shall run the risk of being thought tediously minute.

It has seemed to me a notable defect in Dr. Barton's mode prescribed for dressing this fracture with straight splints, that he directs the two compresses to be of equal dimensions, and of about the same dimensions in every case. He says, "Two compresses, each about two inches square, and composed of strips of bandage about one yard and a half long, evenly folded up, are to be in readiness." Dr. Barton's very eminent skill would undoubtedly vary from this direction, as each case might require. But we object to this as a rule for those who follow rules implicitly.

If we apply a long, straight splint to the palmar side of several uninjured forearms, we shall find the space between the splint and that part of the forearm, to which the compress is usually applied, to vary very much, being two or three times as great in some cases as others. This space will depend upon the form of the bones of the forearm (which are sometimes considerably curved backwards,) upon its muscularity or emaciation, and upon the greater or less prominence of the heel of the hand. This anterior compress must, therefore, vary in thickness, according to the varying form of the forearm and hand.

In order to determine with precision the requisite thickness of this compress in any case, place a long, straight splint upon the palmar side of the uninjured forearm of the patient, and make

a compress of such thickness as to fill the space, so that the splint applied shall bear as firmly upon the compress as the ends of it do upon the wrist and upper part of the forearm. It is to be observed that, when the hand has its usual inclination backwards, the space between the forearm and splint will be less, and of course require a compress of less thickness, than when the hand and forearm are swathed upon a long, straight splint.

With the splint here presented to the College, it is wholly unnecessary to attach this compress to the forearm by means of a roller. And where there is not such a necessity, it is generally worse than useless to apply a roller directly to the arm before the splint is applied. Some eminent surgeon has said, that the only advantage is, that it impresses bystanders with an idea of the complexity and difficulty of the operation. If excoriation should be threatened, cover the part with soap plaster. Place this anterior compress on the splint, so that its lower edge shall approach very near to the lower end of the upper fragment of the radius, when the forearm is laid upon the compress in the splint.

These preparations being made, the fragments, if deranged, are to be reduced, and the splint applied. I have very seldom, if ever, found any difficulty in replacing the fragments. Let an assistant, grasping the hand (not the fingers), incline it towards the ulnar side of the arm, according to the direction of Boyer, making steady, but not very vigorous tension, and with his thumb and fingers the surgeon will easily press the projecting fragments into their proper relation to each other. In making this extension, Dr. Dorsay directs the assistant to "grasp the hand." Dr. Barton says an assistant "makes extension from the fingers." It seems to me that Dr. Barton errs on this point. The objections are, first, that by grasping and pulling the fingers, the flexor muscles are brought into so much more tension, that they will offer more resistance to the extending force. In the next place, by pulling at the fingers the hand will be brought more nearly into a direct line with the forearm, instead of being inclined towards the ulna, the utility of which inclination in such cases is, I think, so obvious that it would be superfluous to cite authority or to attempt a demonstration.

After the forearm is laid into the splint, apply the dorsal com-

press. This compress is seldom essentially necessary in these cases, but it may always be advisable to use it. Its thickness is comparatively unimportant, especially when a dorsal splint is not employed. It may be made of folds of a bandage of about the width of the wrist, and so long as to cover the lower fragment of the radius and the wrist, but not extend upon the hand. After adjusting this compress, apply a roller, beginning upon the lower fragment of the radius, carrying it down over the wrist, the metacarpus and the first joints of the fingers, leaving the thumb free; then returning with the bandage to the upper end of the splint, and attaching it in several places by pins to the woven covering of the splint. If the compresses have been properly made and adjusted, it is unnecessary, with this splint, to apply the bandage with anything like the tension ordinarily employed in dressings with the long straight splints; and those accustomed to the use of these splints will be liable to err on this point.

A dorsal splint is unnecessary, unless the fracture occur so high up that there is danger of diminishing the interosseous space between the bones of the forearm. In such a case, it is necessary. It should be so wide that the bandage will not pass upon the fragments in such a manner as to lessen the interosseous space; and it should be so long as to reach from near the elbow to the hand, but not extend upon the metacarpus.

It may sometimes be necessary to use longitudinal narrow compresses to prevent the contraction of the interosseous space. But where no roller is applied directly upon the arm, it is probable that these long narrow compresses will not commonly be found necessary.

Although the preceding observations have had an especial reference to fractures of the lower end of the radius, probably some of the principles advanced and the means proposed to carry them out, may be extended farther. How far they may be applicable to other injuries or diseases of the forearm and hand, I leave to be determined by future observation.

*Case of Fracture of the Anterior Inferior Spinous Process of the Ilium.* By CHARLES W. ASHBY, M. D., of Culpepper County, Virginia. [Communicated by Professor MÜTTER.]

To the Editors of the Medical Examiner:

Gentlemen: I have just received the enclosed interesting letter from my friend, Dr. Ashby, one of the most eminent surgeons of the State of Virginia. As the case reported has never, to my knowledge, been described, I have thought its publication would prove of value to the profession.

Yours faithfully,

Feb. 18th, 1852. THOS. D. MÜTTER.

Professor Thomas D. Mütter:

*Dear Sir:*—Your kind letter requesting me to send you a report of my case of "Fracture of the Anterior Inferior Spinous process of the Ilium," ought to have been replied to long since.

As you say "there is no such case on record," I will endeavor to detail the symptoms of the accident which occurred in my practice, in such a manner as will enable you to judge of the correctness of my diagnosis.

A strong, athletic negro man, 19 years old, was walking rapidly from a spring, in view of an approaching storm, and, as the night was very dark, he stepped into a gully about a foot and a half deep. He had upon his head at the time, an unusually large tub of water. Although he did not fall, he was so disabled as to require the assistance of men to carry him to the house.

There was great loss of power in the right leg, though not entirely deprived of muscular control, except as to elevation. As I could make the limb perform all the natural movements without much pain, and as I could not perceive, after the most careful examination, the slightest distortion, no lengthening or shortening, I decided, very confidently, that there was neither fracture or dislocation. But the boy, who was more than ordinarily intelligent, insisted most strenuously that he heard and felt something give way, not only at the time the accident occurred, but whilst I had been making the examination.

Upon elevating the leg at right angles with the body and letting it down rather suddenly, I now, for the first time, heard a crepitus, I confess, much to my surprise. By this particular movement and *by no other*, the crepitus was so distinct as to be heard, not only by myself again and again, but by all the bystanders. What fracture have I here? was a most natural enquiry. From the history of the case, I was, at first, inclined to suspect, though in a young subject, a fracture of the neck of the bone, and being aware of the various natures, as well as great obscurity of this accident, my mind was directed most anxiously to its investigation. Reasoning by exclusion, I became satisfied that this could not be the fact; there was not a single symptom which is usually present in this accident—there was little or no pain or tumefaction about the joint, and, indeed, not a sufficient amount of irritation to warrant the belief that there was a fracture of any of the large bones, either of the pelvis or leg.

I requested the boy to direct my hand to the spot where he felt the greatest amount of pain. He placed it in his groin, where I detected, for the first time, a good deal of tenderness and tumefaction. Pressing two fingers of my left hand firmly upon this spot, and with my other hand elevating the leg and letting it down as before, I not only heard the crepitus, but I felt distinctly a spiculum of bone moving under my fingers. This manifestation, not *very* painful to my patient, was performed not once, but I may safely say more than twenty times, and invariably with the same result, before I decided *positively* as to the *precise* character of the fracture.

I was surprised to find that I had been poring over this case at the dead hour of night, for more than three hours. I had never heard or read of such an accident, and therefore only those of my professional brethren who know me best, can appreciate the deep anxiety I felt as to the making out a correct, satisfactory diagnosis.

The maxim that "there is nothing new under the sun," often repeated by a distinguished Professor of my Alma Mater, did not fail to make an impression on my mind, and, properly understood, riper years have served only to deepen that impression. I have not the slightest shadow of a doubt, as to the correctness

of my diagnosis. As to its novelty, I have the high authority of your name, as well as that of other distinguished surgeons, and yet I am of the opinion that the accident has occurred before, but either has not been recognized, or has not been thought worthy of being recorded.

Whether the process was pulled off by the powerful contraction of the recti muscles, or by the tremendous jar of the head of the bone, thrown, in the act of stepping forward, upon the outer edge of the acetabulum, or by both causes conjointly, I leave for others to decide.

The treatment of this case was as effectual as it was simple, and the result, I think, confirmed the diagnosis.

After flexing the limb, a roller six or eight yards long, was passed firmly around the thigh, so as to control muscular action, then passed firmly over a wet compress, placed over the process, thence around the body and back over the compress and around the thigh again. The boy was placed on his side, and experienced immediate relief, so that he slept soundly the balance of the night. Strict rest was enjoined, and he suffered little or no pain after the bandage was applied. In four weeks he was walking about, but wore the bandage and compress for several months, as, he says, it gave him great support.

I am, with high consideration, yours, &c.

CHAS. WM. ASHBY.

P. S. This accident occurred in Nov., 1842.

# CLINICAL REPORTS.

*Clinic of the Jefferson Medical College. Service of* PROFESSOR DUNGLISON.

(Reported by O. A. Judson, M. D., Clinical Clerk.)

*Clinic of January 14th*, 1852.

*Cases presented:*—Chronic Bronchitis; Rheumatism; Tuberculosis of the Lungs, 2 cases; Psoriasis inveterata; Acute Bronchitis; Lupus non exedens; Arthrodynia; Chronic Laryngitis; Lithuria; Lichen; Lepra; Pityriasis; Torpor of Colon, 2 cases; Tænia solium; Tophaceous concretions in the joints; Favus; Diabetes Mellitus; Emesis; Faulty innervation of heart.—Total 22.

CASE 1.—George L., æt. 25, by occupation an umbrella-maker, presented himself this day, having suffered for some time from cough and slight dyspnœa. Various anodyne mixtures were prescribed for his relief, but thus far without any appreciable benefit. His general appearance is that of a person laboring under pulmonary disease; countenance pallid and sunken; eyes having a peculiar shining lustre; has had hæmoptysis and daily exacerbations of fever, but no colliquative sweats. On inspection, the right side of the thorax is observed to rise more than the left, during the act of inspiration, which is rendered more evident by palpation of the anterior walls of the chest during the respiratory process. Percussion exhibits a decided dulness in the infraclavicular region of the left side, with absence of respiratory murmur, with tubal respiration, and bronchophony. The exaggerated respiration in the right lung gives evidence that the great burden of the function is thrown upon it.

The inference drawn from the combination of the rational and physical signs was, that the patient labored under a tubercular deposition at the summit of the left lung; which however gave no signs of having proceeded to extensive softening.

The indication for the treatment of this case is plain; to modify the whole system of nutrition. This can only be done by

modifying the condition of the fluid of the circulation, so that it may exert a new impression upon the tissues through which it is distributed, and thus induce a new action in them. Experience has shown that nothing is better calculated to fulfil this indication than an animal oil, such as the oleum morrhuæ. This oil probably acts altogether dietetically, producing the same deposition of fat as follows the use of sugar when taken largely. The relative value of the different animal oils has not been rigorously determined; but there is reason for the belief, that the cod-liver oil does not possess any eminent advantage over other animal oils; and that similar results follow the use of vegetable oils. In order to test the effects in such cases of another animal oil, the common sperm oil has been purified by the apothecaries of the College by animal charcoal; and the class will observe, that its taste and smell are not much more, if at all more, objectionable than those of the oleum morrhuæ. It is this oil that is meant when the *oleum cetaceum* is prescribed in this clinic. The patient will take a dessert-spoonful three times a day in hot coffee; and, to improve the condition of the fibrinous element of the blood, which appears to be badly elaborated in tuberculosis, he will use animal food freely; relieving the cough by any of the ordinary demulcent and opiated expectorants.

Case 2.—The next patient presented was Francis H., æt. 21, by occupation a stone mason. He had complained for a considerable time of a dull aching pain, which he referred to the region of the kidneys, and which would occasionally shoot down towards the bladder, along the course of the ureter, causing him great suffering. His urine was subsequently examined, and found to be acid, and to deposit urate of ammonia. He was put upon an alkaline treatment, fifteen grains of bicarbonate of soda three times a day, from which, (January 21st), he has experienced considerable relief.

Case 3.—The attention of the class was next directed to a case of glucosuria or diabetes mellitus. John S. V., æt. 36, an operative in one of the manufactories of Chester county, has been sent to Dr. D. by a respectable practitioner under whose

care he had been for some time, and who had accurately appreciated the morbid condition.

About twelve months since, he perceived, that his flesh and strength were beginning to fail, and shortly afterwards he noticed an increased discharge of urine of a sweet taste, which, during the last three months, has become quite profuse, amounting, at times, to fourteen pints *per diem*. It is now, however, reduced to six or eight; yet he is still obliged to rise two or three times during the night to evacuate his bladder. From the outset of the disease his appetite has been voracious; thirst insatiable. His physician put him on the use of five grains of the pulvis ipecacuanhæ et opii, and of four drops of creasote, three times daily. He thinks, however, that his improvement was coincident with his being placed upon an exclusively animal diet.

The urine was subjected to different tests, and the results exhibited to the class; first, to the test of Trommer, which consists in adding to the suspected urine a small quantity of a solution of sulphate of copper, merely enough to give a blue tint,—phosphate of copper is precipitated. Liquor potassæ is then added in excess,—and the hydrated oxide of copper is thrown down, which soon dissolves in the alkaline solution, leaving the liquid of a blue color resembling ammoniuretted copper. It is then heated to ebullition, and if sugar be present the solution yields a precipitate of the red oxide of copper.

This test was perfectly satisfactory as was shown by the specimens on the table.

The test of Moore was also applied and with similar results. This consists, in adding liquor potassæ to the urine and boiling for a few moments, when it assumes a brown color, the intensity of which is proportionate to the amount of sugar present.

Another, and the best test is the addition of a little yeast, and subjecting the urine to a gentle heat; when the supervention of the vinous fermentation, will show conclusively the presence of saccharine matter. Such was the case here.

However profuse the secretion of urine may be in glucosuria its specific gravity is always greater than in the healthy condition. In this instance it is 1029. It is often much higher than this, but as a general rule it may be said to vary from 1020 to 1050. On weighing the extract obtained by evaporation, it will

be found to hold a direct proportion to the amount of urine passed. Based upon this fact, a table was prepared by Dr. Prout, and modified by Dr. Golding Bird, by which we may arrive at an approximation of the amount of sugar passed, without going through the operose process of evaporation. For example: if the specific gravity be 1029, the quantity of solid matter in a pint, according to the table, will be 555.2 grains. By means of such calculations, we are enabled to say how much saccharine matter is secreted from the blood during any given period. For if 555.2 grains of solid matter be contained in every pint, and as many as eight pints are voided during the day, we know that 4441.6 grains of sugar will be passed *per diem*, and such is the quantity discharged by the patient at this time.

The different modes of taking the specific gravity of urine were then explained by means of the areometer or urinometer, and of the specific gravity bottles of 1000 grains and 100 grains respectively, all of which were exhibited, as well as the more operose but always available method with an ordinary vial.

The precise nature of the morbid condition in glucosuria is not manifest. A great variety of opinions has prevailed on the subject, and it still remains an unsettled point. Necroscopic examination has aided but little in the inquiry. The kidneys, have at times presented a hyperæmic condition, with occasionally hypertrophy, which might be anticipated from the incessant duties entailed upon them. For a long time, indeed, it was maintained that the disease must be referred to those great depurating organs; but subsequently more attention was directed to the condition of the blood, which many modern pathologists have considered to be primarily affected. In the progress of well devised and well conducted experiments, unequivocal signs of the presence of sugar have been found in the serum of the blood, and of late the presence of sugar in that fluid has been confirmed by distinguished chemical observers: and to account for its presence there, it has been maintained by many, that the fault is in the apparatus of primary assimilation—that sugar is formed in the stomach during the digestive process, and that, consequently, our remedial measures should be addressed to the deranged condition of the digestive apparatus.

Two distinct views, in this relation, have been maintained by MM. Bouchardat and Mialhe. The *former* is of opinion, that the saccharine matter in the blood of a diabetic patient owes its origin to too great a conversion of starch into sugar occurring in the stomach, owing to the generation there of a principle analogous to the *diastase* in barley, which is the active agent in the formation of malt. The *latter*, also, believes in the conversion of starch into sugar—*glucose*—by an *animal diastase* united with it during insalivation. This glucose is transformed under ordinary circumstances by the alkalies in the blood into new products, which are destined for ulterior purposes; but in default of the proper alkaline character of that fluid, the sugar is not transformed; nor is it assimilated, but ultimately thrown out of the economy, and mainly by the kidneys.

Allusion was then made to the recent discovery by M. Bernard of sugar in the liver, and in the blood of the hepatic veins, vena cava and right side of the heart, no matter what may have been the kind of food taken; and to the singular results, that if the medulla oblongata, especially about the floor of the fourth ventricle, or the pneumogastric nerves, be irritated, an increased quantity of sugar is immediately found in the liver, and soon afterwards a large amount in the urine,—phenomena, which, whilst they may not account for the seat of glucosuria being in the pneumogastrics, sufficiently show, that an increased production of hepatic sugar may be intimately connected with the condition of the nervous system.

From the numerous researches which have been made into this interesting, but difficult subject, and taking into consideration all the arguments that have been adduced by different observers, it may be inferred, that in glucosuria, not only the digestive organs, but the whole system of nutrition or second assimilation may be perverted; that instead of the tissues being disintegrated and their elements combined in the usual healthy manner, they may be brought together in the proportions necessary for the formation of saccharine matter, which, by its presence in the blood, acts as an irritant to the kidneys and gives occasion to the increased secretion of urine, whilst the emaciation ensues more particularly, perhaps, from a perverted condition of the

cells of assimilation, the manufacture of sugar thus taking place at the expense of the system.

The treatment of diabetes has varied according to the pathological views embraced by observers. Formerly, when its nature was less investigated than at present, it was usual to address the remedies to the kidneys—thus treating the effect, rather than the cause; but at the present day, therapeutists, generally, regard the profuse secretion of urine only as a phenomenon indicating a morbid condition elsewhere, and accordingly direct their efforts to the portion of the system which may seem to them to be mainly concerned in producing the mischief. They who regard the stomach as the organ chiefly in fault, address their principal attention to that viscus. But under the impression that the disease is a vice in the system of nutrition, of the exact nature of which we are ignorant, remedies of a eutrophic character, which may be adapted for modifying the entire system of nutrition, would seem to be indicated. There is no single remedy, however, in the catalogue of the materia medica, that appears to be possessed of much efficacy, and too often the disease proceeds onwards, more or less modified by diet and regimen, but is not the less certainly fatal. Unless an entire revolution can be effected in the nutritive process, no permanent good can be accomplished. Diaphoretics of various kinds have been prescribed in consequence of the dryness of the surface that attends the disease; but this is doubtless owing to the increased urinary depuration, and is consequently only an epiphenomenon. Still it may be well to advise the warm bath and warm clothing, as flannel next the skin, to direct the fluids towards the surface.

On one point in the treatment almost all therapeutists are agreed,—the use of an exclusively animal diet. In fact it were no more than reasonable to conclude, that aliments of ternary composition, consisting of oxygen, hydrogen, and carbon, of which the more purely vegetable matter is composed, should be more readily convertible into sugar, than substances of quaternary composition, that contain also nitrogen, which has to be disposed of. Most unquestionably, the saccharine matter has diminished in quantity under the use of animal food; but it may admit of a question, whether this was not in part

owing to the altered nutrititive acts occasioned by restricting one, who has been omnivorous or accustomed to both animal and vegetable food, to the former only. The records of the recent voyage from this country to the Arctic regions, in search of Sir John Franklin, will show that when scurvy prevailed to a fearful extent, a slight change in the diet gave rise to a thorough modification in the whole system of nutrition; and fresh animal food obtained by shooting the awk on its first appearance, in its periodical migration, arrested the malady as if by magic. Usually, it has been deemed indispensable for the production of so desirable a result, that fresh vegetables, containing a full supply of the organic acids, should be freely allowed.

In confirmation of the idea, that any thorough change in diet may induce an entire modification in the system of nutrition in glucosuria, it has been found, where the patient, accustomed to a mixed diet, has been restricted to substances of ternary composition—as oils—or to a vegetable regimen, a similar diminution in the quantity of saccharine matter discharged has been observed. Green garden vegetables, as parsley, celery, spinach, are of quaternary composition, and are not liable to the same objections as the amylaceous and saccharine substances.

In consequence of the ready conversion of starch into sugar, Bouchardat recommends what is called "Gluten bread," from which all amylaceous matter has been removed, as an article of diet; but so much disgust is generally caused by it that it can rarely be persevered with.

The general principles laid down are applicable to the case before the class, and will form the foundation of treatment.

Case 4.—Sarah B——, ætat. 8, was next presented. She had labored under a cutaneous affection of the leg for a long time, which has resisted various kinds of treatment. The disease belongs to the class of squamous affections, and falls under the head of Lepra—Lepra vulgaris.

We will place her upon the eutrophic agency of iodine, giving four drops of the liquor iodinii compositus three times daily. As local applications she will have recourse, several times a day, to ablutions with castile soap and water, the object of which is to

remove the incrustations, so that the remedial agents may come into immediate contact with the morbid surface; each ablution to be followed by the application of a slightly stimulating unguent, which may consist, in this case, of ten grains of the iodide of sulphur incorporated with an ounce of lard—the affected parts to be kept constantly covered with oil-silk, so as to prevent the incrustations from forming, and to shield the surface from the desiccative and irritating influence of the air. The class would have numerous opportunities for witnessing the excellent effects of this system of treatment in chronic cutaneous diseases.

An instance of these good results was shown in the case of John H., aged —, who had been under treatment since October last for an affection of the hairy scalp,—Trichonosis.

He had been using the liquor potassæ arsenitis in the dose of four drops three times a day, and had applied locally an ointment consisting of equal parts of unguentum picis, ung. sulphuris, and unguentum hydrargyri oxidi rubri. Not much benefit having resulted from this course, he was directed to keep the head closely shaved, to wash it with soap and water six or seven times a day, and afterwards with a solution of a teaspoonful of impure sub-carbonate of potassa (pearl-ash,) in a quart of water, and to keep the head covered night and day with an oil-silk cap.

Having been put for a short time on this treatment, he has returned vastly improved.

## BIBLIOGRAPHICAL NOTICES.

*Die Hautkrankheiten durch anatomische Untersuchungen erläutert*, von Dr. GUSTAV SIMON, dirigirendem Artze am Charité-Krankenhause und Privatdocenten an der Universität zu Berlin. Mit 9 Kupfertafeln. Zweite vermehrte Auflagen. 8vo. S. 420. Berlin, 1851.

*Diseases of the Skin elucidated by anatomical Investigations.* By DR. GUSTAVUS SIMON, Directing Physician to the Charity Hospital, and *privatim docens* in the University of Berlin. *With nine Copperplates. Second enlarged Edition.* 8vo. pp. 420. Berlin, 1851.

*Manual of Diseases of the Skin, from the French of* MM. CAZENAVE and SCHEDEL. *With Notes and Additions*, by THOMAS H. BURGESS, M. D., Surgeon to the Blenheim street Dispensary for Diseases of the Skin, &c. *Second American edition, enlarged and corrected from the last French edition, with additional Notes*, by H. D. BULKLEY, M. D., Physician to the New York Hospital; Fellow of the College of Physicians and Surgeons, New York; Lecturer on Diseases of the Skin, &c. &c. 8vo. pp. 348. New York, 1852.

The works before us embody the results of the observations and reflections of two of the most eminent of living dermatologists. The Manual of MM. Cazenave and Schedel has been well known to us in consequence of its having been for a long time translated into English. The excellent work of Dr. Simon is less known here, but is considered to be classical in Germany; and the fact of the volume before us being the second edition of a work which treats only of the pathology of skin diseases, without a word being said of the treatment, exhibits the marked difference between our utilitarian views and those of our German brethren; for we fancy that no work on the mere pathology of such a class of diseases could experience a remunerative sale on this side of the Atlantic.

The bibliography of cutaneous affections is now rich. Ad-

mirable illustrations of the whole series have been published or are in course of publication in England and elsewhere; and there is none more worthy of commendation than that of Mr. Erasmus Wilson. The delineations are accurate and splendid; yet the price at which the fasciculi are published excludes them from the libraries of all except the more fortunate of the profession. To convey a correct idea of the diseases, the text ought always to be accompanied by such illustrations; but still a large amount of information can be brought home to the reader by accurate verbal descriptions. In this respect, indeed, pathological dermatology is in the same category with anatomy.

Dr. Simon first describes the normal skin, and then the morbid alterations which it experiences. Under the latter head he considers MORBID ALTERATIONS OF THE CUTIS AND EPIDERMIS; and, 1st, *Hypertrophies of the Skin and Epidermis*, Callositates, Clavus, Verrucæ, Ichthyosis and Elephantiasis Arabum; 2, *Atrophy;* and 3, *Hemorrhage from the skin;* followed by 4, *Inflammations or Phlegmasiæ of the Skin*—under which he classes Scarlatina, Morbilli, Variola, Varioloides, Varicellæ, Vaccina, Febris miliaris, Erysipelas, Urticaria, Erythema, Roseola, Rubeolæ, Lichen, Prurigo, Eczema, Herpes, Sudamina, Pemphigus, Rupia, Impetigo, Ecthyma, Pityriasis, Psoriasis, Pellagra, Furunculus, Anthrax, Ulcers and Gangrene of the skin. In the main features of this division there is an accordance between Dr. Simon, M. Rayer, Mr. Wilson and others. The next division investigates, 5, *Morbid new formations on the skin*—Cornua cutanea, Nævus mollusciformis or N. lipomatodes, congenital fatty tumors; Molluscum simplex, Condylomata, Nævus spilus; N. lenticularis; Ephelis; Melanosis of the skin and Lipoma, Cholesteatoma; Vascular tumors; Sarcoma of the skin; Osteoid formations; encysted formations, and the various forms of cancer of the skin; Elephantiasis Græcorum, E. tuberculosa, E. non tuberculosa, and Lupus. 6, *Parasites of the skin*; including, first, parasitic animals; and secondly, parasitic plants.

The second great division is into MORBID ALTERATIONS OF THE CUTANEOUS GLANDS, HAIR FOLLICLES, HAIRS AND NAILS, under which he considers, *first*, alterations of the sudoriferous glands; *secondly*, alterations of the sebaceous glands and hair follicles; *thirdly*, alterations of the hairs; and *fourthly*, alterations of the nails.

It will thus be seen that the work of Dr. Simon enters more fully into the morbid condition of the skin and its appendages than the generality of treatises on cutaneous diseases; and as it is restricted to the pathological relations of the subjects on which it treats, it is full and generally satisfactory. The illustrations, which are the result of his own observations as well as those of the best microscopical anatomists of the day—Kölliker, Reichert, Krause, Henle, Bruns, Steinlin, Kohlrausch, Höfle, Fuchs, Gruby, Lebert, Robin and others—are highly elucidative of the anatomy of the skin and its appendages; of the different epithelial and other growths; of molluscous and condylomatous formations; of cancer of the skin; and of parasitic animals and plants; and, on the whole, the work contains a large amount of information to one who is engaged in the study of the essential nature of cutaneous affections.

The Manual of MM. Cazenave and Schedel—as already remarked—has been long before the medical public. In the year 1829, a translation was published in Philadelphia by the late Dr. R. E. Griffith; but the one before us is by Dr. Thomas H. Burgess of London, from the third edition of the French original, with notes and additions by the translator. It is the second American edition by Dr. H. D. Bulkley of New York, who has "enlarged and corrected" it from the last French edition, and appended additional notes. The original work embodied, as is well known, the substance of the views and experience in cutaneous diseases of M. Biett, who was one of the most distinguished dermatologists of France. "It was my text-book," says the English editor, "during the two seasons of my attendance at the Hospital of Saint Louis, under M. Biett, and since that period I have had increased opportunities in this country [England] of testing its value as a practical guide in the treatment of cutaneous affections. I can conscientiously say that I know of no other work of a similar kind, either in the English or any other language, which is preferable to that of MM. Cazenave and Schedel, nor one which would answer our present purpose so well. The clear and methodical manner in which the diseases are arranged, and the concise and simple style of the work, contrast

favorably with the vague and obscure descriptions generally found in treatises on diseases of the skin."—*Preface to the English Edition.*

Equally encomiastic is the American editor. "Embodying as it does," he remarks, "the results of the long experience and accurate observations of M. Biett, so favorably known for his zeal and industry in the pursuit of this branch of our profession, and drawn up by pupils of this able teacher, who enjoyed the advantages of the same extensive field in which he himself studied, it may be safely recommended to both practitioners and students, as combining faithful and graphic descriptions of these diseases, and sound principles for their treatment. Having myself adopted it as a text-book in the study of them at the Hospital of St. Louis, (well known to be specially devoted to these diseases in Paris) and having also since used it in several successive courses of lectures on the subject in this city, I need hardly say that I fully coincide with Dr. Burgess in his opinion as to its merits." "The present edition," he adds, "has been carefully compared with the original, and numerous omissions supplied of passages which the translator thought proper to omit, but which it is thought, both in justice to the authors and to render the work more complete, ought to be restored. Some errors also have been corrected which doubtless escaped his observation. Notes have been added, consisting mostly of the Editor's experience in the treatment of these diseases during the last eleven or twelve years, both in dispensary and private practice, with references to other works and to the experience of those entitled to confidence." Thus much from the Preface to the first American edition. In the one prefixed to the edition before us Dr. Bulkley remarks: "Six additional years, during which the Editor has both studied and lectured upon these diseases, have furnished him with materials from his own experience and from that of others, the more important of which he has interwoven with the notes and references in the former edition; and he trusts he has been enabled in this way to enhance the value of the work, both to the student and the practitioner, without materially increasing its size."

All these gentlemen—it will be observed—followed the excellent instruction imparted on skin diseases at the Hôpital Saint Louis; and all may naturally be presumed to be partial to a

manual, which embodies the observations and reflections of one so distinguished as M. Biett in the field of the profession which he so assiduously and successfully cultivated. We do not, however, think that their partiality has induced them to overestimate the work of MM. Cazenave and Schedel; we can, indeed, unhesitatingly endorse the encomiums they have passed upon it. The classification he adopts is what Dr. Simon calls the Willan-Bateman'sche Systeme, for which, in teaching, we are free to admit our preference, notwithstanding objections that may be urged against it—and what classification is free from them? It is on the basis of that of Plenck, "which," says MM. Cazenave and Schedel, "in the present state of our knowledge, cannot be surpassed in clearness and precision." And, in their last edition, they observe that it is in diagnosis that the classification of Willan exhibits its great advantages; and they add, that even if a natural classification of cutaneous diseases should at some future period be formed, that of Willan will always be retained for the purpose of diagnosis. Such is decidedly our own conviction; for, whilst we admit that the discrimination of the elementary lesions of the skin is not always easy, and that we may often remain in doubt as to which of the great divisions any special case may belong, it is liable to as few objections as any, and is decidedly more easy for the teacher and the student than any other. The classification of Biett, followed by MM. Cazenave and Schedel, like that of Willan, consists of eight orders—Exanthemata, Vesiculæ, Bullæ, Pustulæ, Papulæ, Squamæ, Tubercula and Maculæ; with the additional orders, Lupus, Pellagra, Malum Alepporum, Syphilida, Purpura, Elephantiasis Arabum and Cheloidea.

One form of difficulty in the diagnosis of a cutaneous disease, arises from the difficulty of appreciating the primary lesion as the elementary character may have disappeared, and given place to the secondary phenomena.

"The fluid of a vesicle"—say MM. Cazenave and Schedel—"may, for example, dry off and leave a small incrustation; a pustule may be converted into a scab, and the latter give way to an ulcer; hence it is necessary that we should study these secondary lesions, and know to what primary characters they correspond. Incrustations may succeed vesicles, vesicopustules, and papules; scabs occur in most pustular diseases, and ulceration may be a consequence of rupia, ecthyma, &c.

In cases like the foregoing, we must first ascertain the nature of the secondary lesion, then determine its corresponding primary element, and finally pursue the course just pointed out. For example, a patient comes to us with a disease of the skin, characterized by thick, rough, yellow scabs, which cover a large portion of the extremities, especially the legs, and when they fall off, expose superficial excoriations; the latter discharge purulent secretion, which dries up, and forms fresh scabs, these being the most characteristic features of the disease. Now it is easy enough to tell at once that this is a pustular affection, but not so easy to determine its species. The disease is evidently neither *variola* nor *vaccinia*; the pustules of *ecthyma* are large, isolated, and frequently covered by black, tenacious scabs, which end in ulceration; it is neither *acne* nor *mentagra*, the pustules of which rarely ever give rise to scabs, and are especially followed by chronic indurations. The only affections, then that remain are *impetigo* and *porrigo*, and we have merely to compare the character of these two species in order to decide. It is unnecessary to enumerate here the signs by which we know that the disease is not porrigo; it is therefore *impetigo*, and as the scabs are scattered irregularly over the limb, it is *impetigo sparsa*.

In the preceding cases we have supposed that there were no remains of the distinct elementary lesion, while, in the great majority of cases, on the contrary, some may always be found perfectly unchanged in the neighborhood of the affected part.

In some cases different elementary lesions occur in the same subject, but even here we always find some predominant form, of which the rest are but complications. However, it may happen that we cannot ascertain at once the true nature of the disease. This occurs in certain chronic affections, where the elementary character gradually disappears, and seems confounded in a different order of phenomena. Even here a sudden exacerbation of the disease, or a return to health, may develop its primary character. The general remarks which we have just made do not appply to those orders which are not characterized by special elementary lesions; but the latter are distinguished by phenomena which we cannot mistake; or even, when they assume, as in syphilis, the elementary forms of other cutaneous diseases, they present certain special appearances, which leave no doubt about their nature. Finally, we must neglect nothing which can assist us in our diagnosis of cutaneous diseases. Beside the elementary characters, there are many signs, as the seat, form, and color of the eruption, its progress, condition of the patient, &c., which strike the practical observer, and enable him often to dispense with details."—P. 24.

In regard to the treatment of chronic cutaneous diseases in general, it luckily happens, that the same indications are presented in all. Where undue irritation or inflammation of the skin is present, it has always to be combated by appropriate agents; but in such as have long continued, owing to a *vice* in the system of nutrition of the part, which has to be broken in

upon, the same principles and the same agents for fulfilling these principles are generally indicated. There are but two modes on which we can act upon the affected tissues,—the one through remedial agents which may modify the blood, and through it the system of nutrition; the other through topical remedies, which are made to come into immediate contact with the diseased surface. Hence, the employment of such articles, as the oleum morrhuæ, and of the different preparations of iodine, of arsenic and of mercury, singly or combined, associated with various excitant ointments, is generally required. In the most inveterate cases, such an association is demanded; whilst in others topical remedies may be sufficient; but unless a proper system of discipline be enforced in regard to various affections of long standing, as lepra, psoriasis, trichonosis, &c., little effect will result from the application of any remedies. It may be laid down as a cardinal principle of management, that the cutaneous surface should be kept free from every concretion, by proper ablution, often repeated in the course of the day, and by the use of an appropriate unguent; and that by means of an oil silk covering, where this is practicable, the affected part should be maintained free from the irritating and desiccative influence of the air, so that the topical application may be kept in constant contact with the morbid surface; whilst the latter is preserved in the most favourable condition for the exercise of that recuperative action of the cells, without which all our remedial means must be fruitless; and if this course be persevered in, it is astonishing how successful will be the treatment of such cases; even after they have resisted the use of the same agents, less carefully and less systematically employed.

We would especially urge this desideratum in the treatment of chronic cutaneous diseases, from no little experience of its efficacy.

On every point connected with the management of cutaneous affections, the work of MM. Cazenave and Schedel, improved by the observations of Drs. Burgess and Bulkley, affords valuable information. The notes of Dr. Bulkley appear to be, in general, extremely pertinent. We observe, that he objects to the location of ichthyosis by MM. Cazenave and Schedel amongst the squamous affections as "misnamed as well as misplaced. There is nothing *scaly* about it." And we agree with him; but we

are not so much in accordance with his view, that the name "*warty* disease" would be much more appropriate than that of fish-skin. "It is true"—he adds—"the cuticular appendages are not organized like true warts, and do not bleed on being removed; but otherwise their physical characters have a much greater affinity to those of warts than to the scales of fish." (Note, p. 240.) We should have objected less to the location of ichthyosis under "hypertrophies of the skin and epidermis," as has been done by Dr. Simon, (*Die Hautkrankheiten, s.* 42,); but we accord much more closely with the more recent views of Mr. Wilson on the pathology of this affection. "In the preceding edition of this work"—he remarks—"I regarded certain of these exodermal productions as hyperformations of epiderma, resulting from enlargement of the papillæ of the derma, while I retained others in the present group, under the designation of ichthyosis sebacea. I have since prosecuted my inquiries further into this subject, and have obtained clear evidence, that all the forms of ichthyosis are of the same nature; that they are, in fact, all concretions of altered sebaceous substance." (*On Diseases of the Skin*, 2d Amer. edit. p. 329, Philada., 1847.)

But we have exhausted our space, without having by any means exhausted the subject. All we can say, in conclusion, is, that the present edition of the work of MM. Cazenave and Schedel, enriched by its translator and annotators, is much more worthy of approbation than its predecessors; and may be consulted with eminent advantage, by every one who is desirous of being *à portée* with the existing condition of dermatological investigations, both as regards their pathology and therapeutics.

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*Report of the Pennsylvania Hospital for the Insane, for the year* 1851. By THOMAS S. KIRKBRIDE, M. D., Physician to the Institution.

Dr. Kirkbride's *eleventh* annual report presents a highly interesting picture of the noble institution under his charge. The following points in connection with the history of the hospital during the last year, deserves notice.

"For several months, during the past year, the whole house was inconveniently crowded, but the general good health which then prevailed

enabled us to receive all the cases that were brought to the Hospital, although much difficulty was often experienced in accommodating them. As a large proportion of the people of Pennsylvania have always been accustomed to look to the Pennsylvania Hospital for relief for their friends when afflicted with insanity, it was felt to be a duty, as far as possible, to receive all whose condition rendered their removal from home important, or who were likely to suffer from the want of prompt treatment. The prospect for the State provision for the insane being soon available, was also another reason for our being willing, for a short period, to be somewhat incommoded by too large a number of patients, and we now have reason to believe that our present apartments will hereafter prove ample to accommodate all applicants for admission.

Of the patients discharged during the year 1851, were

| | |
|---|---|
| Cured | 107 |
| Much improved | 13 |
| Improved | 32 |
| Stationary | 23 |
| Died | 26 |
| Total | 201 |

Of the patients discharged "cured," fifty-two were residents of the Hospital not exceeding three months; twenty-six between three and six months; twenty-three between six months and one year; and six for more than one year.

Of those discharged "much improved," three were under treatment less than three months; five between three and six months; two between six months and one year; and three for more than one year.

Of the "improved," nine were under care less than three months; five between three and six months; eleven between six months and one year; and eight for more than one year.

Of those discharged and reported "stationary," six were under care less than three months; four between three and six months; four between six months and one year; and nine for a longer period than one year.

Sixteen males and ten females have died during the year. Of these deaths, eight resulted from acute mania; one from acute dementia; five were cases of organic disease (softening) of the brain, of which the mental affection was only a symptom; one was from epilepsy; two from pulmonary consumption; three from dysentery; one from chronic ulceration of the throat; one from the exhaustion produced by a long continued refusal of food; one from suicide; one from cancer; and two from old age.

Of these deaths, eight occurred within less than a fortnight after their admission; while two were of patients who had been thirty-six years residents of the Hospital, and one had been more than twenty-five years.

Several of the cases of acute mania were undoubtedly injured by the

journey to the Hospital during the existence of the acute symptoms, which often cannot without difficulty be distinguished from those of inflammation of the brain. While this doubt exists, the patient had better be retained at home, and the probabilities of ultimate recovery are not lessened by such a course.

Of the patients who died, ten were admitted for mania; six for melancholia; and ten for dementia."

"The most important improvements made during the year, have been the erection of a new Museum and Reading-Room, increased means for a supply of water, with a change in the mode of raising it to the dome of the building, and additional apparatus for security from accidents by fire.

In addition to these improvements, a handsome summer-house has been erected on the mound in the ladies' pleasure-grounds. This mound, it may be recollected, is in a portion of the grounds from which, formerly, the view was very limited. The mound is about 80 feet in diameter at its base, 11 feet high, terraced and planted with shrubs and flowers, and, from the new summer-house on its summit, the view is one of the most extensive and pleasant to be found on the premises, without being at all deficient in the requisite degree of privacy.

The pleasure railroad, formerly in the lawn adjoining the main front of the centre building, has been removed to the woods, in the grounds appropriated to the female patients. This position for it is more desirable in every respect; with a much greater degree of privacy for all, it has now become accessible to a large class of patients who before had rarely, if ever, used it; while the fine trees, among which it is placed, make the exercise quite admissible at all hours, even in the warmest weather. The only objection to this arrangement is that, as now situated, the road can be used only by the female patients. With our present increased numbers, however, it will probably soon be deemed expedient to erect one of a similar character, on some part of the men's grounds, as it is a valuable means of exercise and amusement, highly enjoyed by a large number of patients.

The main culvert, into which all the branch culverts enter, and which formerly terminated a few feet beyond the western wall of the pleasure-grounds, has been extended across the adjacent meadow, a distance of 229 feet, so as to empty directly into Mill Creek, instead of doing so by circuitous route, as had been previously the case.

A bath-room over a vestibule on the north side of the physician's residence, has been completed; and that building supplied with water by a connection with the reservoirs in the dome of the Hospital."

"*The Association of Medical Superintendents of American Institutions for the Insane.*—Among the pleasant incidents of the past year, must be noted the very gratifying visit, which this Hospital in common with other institutions for the insane in this vicinity, received from the members of this Association during its recent meeting in Philadelphia. Founded in 1844, when its first meeting was held in Philadelphia, it now numbers among its associates nearly all the members of the medical

profession in America who are devoting themselves to the care and treatment of the insane. It has held annual meetings in various parts of the United States, and its members have visited and examined a number of the institutions for the treatment of mental diseases.

Such a body of men, possessing so large an amount of practical knowledge on this interesting subject, so capable of judiciously criticising what is defective and appreciating what is commendable in every department of such establishments, cannot but always be most welcome guests to all who are in any way concerned in their management, and anxious to profit by the experience of others. It can scarcely admit of a doubt but that it is the interest of every institution for the insane, on the continent, to be regularly represented at the meetings of the Association."

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*Remarks and Recommendations on the Professional Education of Dentists.* By JOHN TRENOR, M. D., of New York. [From the New York Journal of Medicine.]

This pamphlet presents a very judicious and forcible argument in support of the position, "that a thorough knowledge of medicine and surgery is absolutely essential to enable the practitioner of dentistry clearly to understand and successfully to treat the cases which are constantly coming under his care." Dr. Trenor very decidedly coincides in the opinion lately expressed in this journal, by our correspondent, Dr. E. B. GARDETTE, that the *dental colleges*, brought into existence within a few years, are inefficient to remedy the deficiences which have existed in dental education; and he maintains that they can be supplied to advantage "only in a well organized medical school." These views, we believe, are entertained by a large proportion of the best educated practitioners of dentistry in this country; and we learn that the propriety of attaching a chair of dental surgery to some of our Faculties of Medicine, has been recently urged and seriously canvassed.

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*Essays on Life, Sleep and Pain, etc.* By SAMUEL HENRY DICKSON, M. D., Professor of Institutes and Practice of Medicine in the Medical College of the State of South Carolina.

This is a very interesting book on a very interesting train of topics, involving the domains of physiology, hygiene, metaphysics, and ethics, and centering in that subject of all-absorbing

fascination—"what 'tis we are, and we must shortly be." Our object in this notice is to express the very great gratification which the perusal of Dr. Dickson's Essays has afforded us. Designed, as the author informs us, rather for general than technical application, they are scarcely within the province of extended critical notice in a medical journal; and we have only to express our brief approval of what we feel satisfied must have already become one of the popular works of the day.

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*A Treatise on the Diseases of the Chest, being a Course of Lectures delivered at the New York Hospital.* By JOHN A. SWETT, M. D., Physician to the New York Hospital.

In our next number, we shall notice at length this work, which has just been issued from the press of Messrs. D. Appleton & Co. of New York.

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# THE MEDICAL EXAMINER.

## PHILADELPHIA, MARCH, 1852.

We beg leave to call the attention of our readers to the following excellent system of summer instruction, the advantage of similar schools having been amply tested by students who remain in Philadelphia during the summer months. There are two in successful operation here, viz.: the Philadelphia Association for Medical Instruction, whose announcement will be found in our advertising sheet, and the Philadelphia Medical Institute.

### CHARLESTON PREPARATORY MEDICAL SCHOOL.

Preparatory Schools of Medicine have, for a long time, been very much needed in the United States.

Impressed with this fact, the American Medical Association, a few years ago, unanimously adopted a resolution in which the establishment

of such Schools was strongly recommended. In the Southern States, two have already been projected, and there can be little doubt that before many years they will be found wherever Medicine is systematically taught.

Acting upon the recommendation of the American Medical Association, the undersigned have united for the purpose of establishing an Institution of the kind,—a school, of which the object will be to impress upon the student's mind the elements of medical education, in conjunction with a practical knowledge of his profession.

The Marine Hospital, and the Hospital attached to the Alms House, afford an opportunity of studying a variety of cases at the bedside; and the Physicians* attached to those institutions, will give Clinical Instruction twice a week, or more frequently; the Roper Hospital, with accomodation for beds, it is hoped will be completed in a short time; and the most distinguished Surgeons of the city have kindly promised to operate in the presence of the students on such cases as may conveniently be brought before the class. In addition to which, the students will have access to all cases among the patients of the Teachers in the school, as they can with propriety be allowed to visit.†

Before each lecture, all members of the class, who do not object, will be examined thoroughly on the preceding lecture in the same department; and during the session of the Medical College of the State of South Carolina, they will be examined gratuitously on the lectures delivered at that Institution.

Hygienic improvements, vigorously carried on during many years past, have, there is reason to hope, now rendered Charleston entirely exempt from even those *occasional* epidemics of fever which formerly deterred strangers from visiting her in summer; and her mortuary statistics prove her to possess a salubrity of climate enjoyed by very few cities in the world.

The expense of living here is moderate. Board and lodging may be had in respectable houses from $3.50 to $5 a week, and upwards, according to the character of the accommodation furnished.

*Drs. D. J. Cain and J. F. Prioleau.

†Such cases as can be brought to the Lecture room will there be exhibited and explained.

Drs. R. Sobby and J. F. Mitchell, who have each a large Obstetrical Practice, will, as well as the regular teachers in the school, enable the student to see midwifery cases as frequently as possible. In short, ample opportunity will be afforded for acquiring a practical as well as theoretical knowledge of the profession.

A line of steamboats, making frequent and regular trips, enables one conveniently to attend to business in the city through the day, and to spend the evening and night in the enjoyment of the delightful atmosphere of Sullivan's Island.

The session of the School will commence on the first Monday in April, and terminate on the last Saturday in July.

The different Chairs will be occupied as follows:

*Anatomy and Physiology*,—By Dr. F. T. MILES.

*Institutes and Practice of Medicine*,—By Dr. D. J. CAIN.

*Materia Medica and Therapeutics*,—By Dr. F. PEYRE PORCHER.

*Obstetrics and Diseases of Women and Children*,—By Dr. E. BELIN FLAGG.

The Chair of Surgery has been offered to a gentleman now in Europe. Should he accept it, his name will appear in another Prospectus a few weeks hence; should he not do so, the Chair will be otherwise filled as soon as an answer from him is received.

*Terms.*—Fifty dollars for the Course, including Examinations during the Winter.

N. B.—Further information can be obtained from Dr. Cain, No. 98 Wentworth Street, Dr. Flagg, No. 15 Archdale Street, Dr. Porcher, No. 30 Wentworth Street, or Dr. Miles, Beaufeiul Street.

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At a Stated Meeting of the Northern Medical Association held January 1st, 1852, the following members were elected as Officers for the present year.

*President.*—Dr. B. S. Janney.

*Vice President.*—Dr. N. L. Hatfield.

*Counsellors.*—Drs. J. F. Lamb, J. Uhler, J. Remington, G. W. Patterson, and J. N. Handy.

*Treasurer.*—Dr. M. B. Smith.

*Secretary.*—Dr. J. Henry Smaltz.

*Corresponding Secretary.*—Dr. J. Remington.

*Reporting Secretaries.*—Drs. H. Hartshorne, S. N. Troth.

*Delegates to American Medical Association.*—Drs. J. F. Lamb, R. H. Townsend, N. L. Hatfield, H. Hartshorne, W. Maybury and R. J. Levis.

Extract from the Minutes.

J. HENRY SMALTZ, Sec. North. Med. Association.

CIRCULAR.

*Paris, France, January 10th,* 1852.

At a recent meeting of the American physicians in Paris, an association was established, whose object is the promotion of medical science. This association, essentially national, is now progressing under the most favorable auspices; it is intended to be permanent in its nature, and is designated the "*American Medical Society in Paris.*"

Notwithstanding the vast advantages afforded by the French metropolis for the study of medical and surgical science, we feel ourselves isolated from our national medical literature, and, therefore, confidently appeal to the conductors of American journals and periodicals.

We do this with the less hesitation, feeling assured, that it will be not only a medium of improvement to ourselves, but a means of a more general diffusion and just appreciation of American literature.

By order of the Society,

ALEXANDER J. SEMMES, M. D., of D. C.

*Corresponding Secretary of the American Medical Society in Paris.*

Secular and professional journals in the United States, are very respectfully requested to copy the above circular.

P. S. In accordance with the resolutions of the American Medical Society in Paris, Dr. R. M. Jones, of Lexington, Ky., and Dr. Alexander J. Semmes, of Georgetown, D. C., have been appointed two of three delegates authorized. These gentlemen will sail from Liverpool in time to present their credentials and request seats in the Convention.

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## MEDICAL NEWS.

PENNSYLVANIA HOSPITAL.—The Board of Managers of this Institution have resolved to appoint an additional attending surgeon, which increase will make the number of surgeons *four* instead of *three,* as at present. The election for this post will be held on the first Monday in May.

MEDICAL DEPARTMENT OF THE ARMY.—By a Board of Army Surgeons, which recently convened in the city of New York for the examination of Assistant Surgeons for promotion, and of candidates for appointment in the Medical Staff of the Army, the following named gentlemen were examined and approved.

*Assistant Surgeons.*—Levi H. Holden, Richard F. Simpson, Robert Murray, and Lewis A. Edwards.

*Candidates for Appointment.*—Basil Norris, Md.; T. Charlton Henry, Pa.; Andrew J. Foard, Ga.; Edward P. Vollum, N. Y.; John Moore, Ind.; Andrew K. Smith, Conn.; Edward H. Watson, Pa.; Richard Potts, Md.; Richard H. Alexander, Ky.; and George Suckley, N. Y.

A BOARD OF NAVAL SURGEONS convened on the 16th ult., at the U. S. Naval Asylum, for the examination of Assistant Surgeons for promotion. The Board consisted of Surgeon Thomas Dillard, President, and Drs. Horner, Mosely, Blacknall, and Hunter, members.

DR. VALENTINE MOTT has been recalled to the Professorship of Surgery, and the Presidency of the Medical Department of the University of New York. It is not known whether the Doctor will accept. The effort having failed to secure Dr. Goddard, of Philadelphia, for the chair of Anatomy, vacated by the death of Dr. Pattison, it is thought that Dr. Van Buren will be appointed to that post.

EXTRAMURAL INTERMENTS IN LONDON.—Lord J. Russell has lately announced, that the Government of Great Britain would shortly introduce a bill to facilitate the promotion of this desirable hygienic reform.

THE MUMMY FOUND IN ST. STEPHEN'S CRYPT, WESTMINSTER.—On Saturday, 31st January last, a minute examination of the mummy found a few days previously, took place in London. The body, after being unrolled, was removed from its narrow cell and placed upon a bench. An incision having been made down the centre of the abdomen, and in a lateral direction round the skull, a layer of fine thick canvass cloths was removed from off the face. A second series bound round by string having then presented themselves, they were in due course loosened, and the face was disclosed in a remarkable state of preservation. The cartilage of the nose was not at all decayed, and, with the lips and other portions of the face, remained perfectly flexible to the touch. Even the expression of the countenance was in a degree retained, and it was remarked that the identity of the individual would not have been impossible, had any compeer of his venerable age been present. The stomach was found to have retreated from the cloth, and to have become a mass of adipose matter, in which state the legs and arms were also found. No writing of any description was discovered in the folds, nor was any mark leading to an identity of the individual found. The body measured 5 feet 11 inches in length; and, judging from the front teeth remaining, three or four of which in the lower jaw were

much worn, must have been that of a very aged man. The mouth was filled with tow, which had evidently been steeped in wax; and a small quantity of hair remained on the chin and upper lip. The crozier was entirely of oak, with an elaborately carved crook—the whole measuring 6 feet 2 inches in length. The gentlemen present at the examination unanimously agreed, that the presumption of its being Lydwolfe, Bishop of St. David's, who died about the middle of the fifteenth century, was almost indisputable.

Death of M. Gannal.—The Paris obituary list of the last week in January contains a name of some celebrity, that of M. Gannal, the inventor of the new embalming system. His career was a singular one. Apprenticed to an apothecary in early life, he imbibed that taste for, and acquired that knowledge of chemistry, which subsequently proved so serviceable to him. At the commencement of the century, the conscription forcibly took him from his favorite studies. In a short time, he became attached to the medical corps of the French army in Germany, and was present at some of the great battles of Napoleon against Prussia and Austria, and formed part of the medical staff in the Russian campaign. In the disastrous retreat which followed, he was taken prisoner at Wilna, but on four occasions succeeded in making his escape, and was as often recaptured. After a thousand adventures by flood and field, in 1815 he returned to France, where his acquirements soon obtained for him a place in the School of Pharmacy, and he made several curious discoveries in chemistry, which, however, with the exception of a prize at the Academy of Sciences, procured him no real advantages; until his great discovery of embalming by means of a chemical preparation, which in a few years made him master of a large fortune. M. Gannal's account of his process was published in 1839, in this city, translated by the late Dr. Richard Harlan.

Naval Assistant Surgeons.—The cause of the Naval Assistant Surgeons progresses. It will no doubt be a subject of congratulation to to the gentlemen in the Service to know, that Admiral Houston Stewart, one of the Lords of the Admiralty, and Mr. Montague Chambers, Q.C, both being candidates to represent the borough of Greenwich in Parliament, have promised to insist that the Admiralty Order of July, 1850, shall be carried out in strict integrity and without evasion. We hoped to publish the correspondence that has taken place on this subject between the respective candidates and Mr. T. M. Stone; but, for certain reasons the naval candidate objects to the publication of his letters.

Mr. Chambers, however, states, that the subject to which his attention had been drawn by Mr. Stone, had occupied his thoughts long before he was solicited to become a candidate to represent Greenwich; that it was his opinion the Naval Assistant-Surgeons should occupy a very different position as men of education, competent to discharge such serious and essential duties so intimately connected with the welfare, the safety, and the comfort of the Naval service. "I assure you most sincerely," says Mr. Chambers, "that I am thoroughly convinced of the necessity of the Admiralty Order, and that to the utmost of my power I will afford any assistance I can, as a Member of Parliament or otherwise, in causing it to be carried into execution according to *its true spirit and object;*" and, in conclusion, Mr. Chambers states, that "the condition of the other medical officers must be improved, and placed on a similar footing to their more fortunate brethren in the Army." Fearing he had not been sufficiently explicit, he again wrote to Mr. Stone, expressing his regret that he was not at home when that gentleman called on him, as it would have enabled him to confer with Mr. Stone "upon the most useful way of serving the cause of the Naval Assistant-Surgeons, and glad to have the opportunity of expressing my sentiments, and affording even the most trifling aid in so good a cause."

It is generally understood in Greenwich, that both the gentlemen will be returned to parliament. This will then be a great addition to the ranks of those members who have already so nobly supported Captain Boldero in his efforts to improve the position of the Naval Assistant-Surgeon.—*Lond. Med. Times.*

### MR. SYME'S ORIGINALITY.

*To the Editor of the Medical Times.* SIR,—I read in your replies to correspondents a notice regarding my former master, Professor Syme. His wonderful operations have, as is well known in Edinburgh, excited the jealousy of London surgeons, who are still unwilling to admit that all discoveries in surgical science for the last forty years have emanated from our University. Who, before Mr. Syme, introduced the excision of joints? Who, before Mr. Syme, operated at the ankle-joint? As to your notice of the perineal section, stated to have been performed by a French surgeon of little note, I ask, where are the cases which he has recorded? and why are we to believe your simple assertion in preference to others? As for the lip operation, so peculiarly his own, who ever dreamed of restoring that important organ before Mr. Syme? In diagnosis, too, Mr. Syme is notoriously pre-eminent. Who but he de-

tected an aneurism of the carotid, and tied it too, when his colleague had diagnosed a strumous gland? Who but he cut down upon the iliac, when others only saw a malignant tumor of the groin? You may attack the professional characters of those whom you and your compeers can never hope to equal: but I tell you that there are plenty who, with myself, are willing to believe in Mr. Syme's statement, before all the medical journals put together, and ready to take up more than the cudgel in his defence. I am, &c.

Edinburgh. A FORMER PUPIL OF MR. SYME.

[As regards our correspondent, it is evidently not true that "the ass knoweth his master's *crib*."—ED. *Med. Times.*]

A BRAZEN HOMŒOPATH.

To the President of the Royal College of Physicians.

SIR,—I am anxious to know if you will admit me to an examination for the degree of Doctor of Medicine, and as I wish to act honestly and fairly to you, I think it best to state, that I differ from the views of the College in one branch of the examination—viz., the therapeutical. However, I will give my answer to any question you put according to the old mode of healing disease, and at the same time, if agreeable to you, state what homœopathists consider the best method of curing disease. I trust the fact of my being a homœopathist, which I am from conviction and long experience, will not prevent you from granting me that diploma which I am desirous of obtaining. I have the honor to be, &c., &c.

*Reply.*

SIR,—The foundation of the Royal College of Physicians was for the purpose of guaranteeing to the public skilful and safe practitioners. The College of Physicians regard the so-called homœopathists as neither skilful nor safe practitioners. Therefore the College cannot, without betraying a sacred trust, give its license to persons whom they regard as wholly unworthy their confidence, and with whom it is not possible they can hold any communion. I remain, sir, your obedient servant,

*Dublin Med. Press.*] J. A. PARIS.

MEDICAL CHARITIES—The following princely donations have been bequeathed to the undermentioned medical institutions by the late Mr. Thomas Dickinson, of Upper Holloway. The Idiot Asylum, 2000*l.*; the London Hospital, 1000*l.*; the Royal Free Hospital, 1000*l.*; the Charing Cross Hospital, 1000*l.*; the Fistula Infirmary, 1000*l.*; and the Holloway Dispensary, 500*l.* In addition to the above munificent sums to medical charities, this genteman has left similar large amounts to various non-medical institutions.—*Lond. Med. Times.*

Honors of Medical Men.—It has pleased the Queen to grant permission to Mr. Owen, the distinguished professor of Comparative Anatomy at the College of Surgeons, to reside in one of the houses on Kew Green which belonged to the late King of Hanover. The gift was accompanied by a very flattering letter from Prince Albert to the professor. Another of the houses on the same green has, we understand, in a like kindly spirit, been presented for a residence during life to Dr. Joseph Hooker. We have also to record a mark of royal favor bestowed by a foreign sovereign on Professor Owen. Our readers know that the King of Prussia instituted some time since an Order of Merit, for men distinguished in art and in science—and which consists of sixty chevaliers, thirty Prussians and thirty foreigners. Amongst the latter was the late Professor Oersted; and Professor Owen has been selected by Frederick William to supply the vacancy occasioned by his death. In this order there are now five Englishmen:—Mr. R. Brown, Sir David Brewster, Sir J. Herschel, Mr. Faraday and Professor Owen.—*London Lancet.*

Munificent Donation.—The Countess de la Riboisière has left all her property to the city of Paris, the surviving Count retaining a life-interest. This bequest, which is said to amount to the enormous sum of £320,000, is intended for the foundation of an hospital, which is to bear the name of La Riboisière.—*Ibid.*

Baron Pasquier, formerly surgeon to Louis Philippe, died at Paris on the 4th of January, 1852. His widow has been granted a pension from Government, as she was left without property.—*Ibid.*

Medical Museums.—The famous toxicologist, Professor Orfila, ex-dean of the Medical Faculty of Paris, has recently returned from visiting the chief medical museums of Germany. He had previously explored those of Italy, Spain, and England. The palm of superiority he awards to France; though he admits that in some things the French museums are excelled by those of London and other places. In comparative anatomy, the museum of our College of Surgeons, and the Berlin museum of normal anatomy, take the foremost rank. The collection of skeletons contained in the latter is unrivalled, both for the number and beauty of the preparations. *L'Union Médicale*, of 11th December, devotes a *feuilleton* to Orfila's notes on the German museums.—*London Journ. of Medicine.*

INTERNATIONAL SANITARY CONVENTION IN PARIS.—It was certainly a happy idea to collect in Paris, delegates from all the countries bathed by the Mediterranean, in order to frame laws and regulations, which should place the sanitary relations of the various countries upon an uniform basis. This convention, composed principally of medical men, consuls, &c., has just closed its meetings, which took place once a week regularly for the last six months; and plans for international sanitary relations have been framed and placed in the hands of the French Government. When these plans have been ratified by the respective powers, they will be published and put in force. It is, however, already known that the system of quarantine will be thoroughly changed; in fact, orders have already been given by the French Government to pull down the lazaretto at Marseilles, and convert it into docks. We shall just mention, *en passant*, that each member of the convention has been courteously decorated with the cross of the Legion of Honor. When shall we have marks of distinction bestowed upon deserving medical men in this country?—*London Lancet.*

ARSENIC EATERS.—A trial for murder took place lately in Austria, in which the prisoner, Anna Alexander, was acquitted by the jury, who, in the questions put to the witnesses, in order to ascertain whether the murdered man, Lieutenant Mathew Wurzel, was a poison-eater or not, educed some curious evidence relating to this class of persons. As it is not generally known that eating poison is actually practised in more countries than one, the following account of the custom, given by a physician, Dr. T. von Tschudi, will not be without interest. In some districts of Lower Austria and in Styria, especially in those mountainous parts bordering on Hungary, there prevails the habit of eating arsenic. The peasantry in particular are given to it. They obtain it under the name of *hedri* from the travelling hucksters and gatherers of herbs, who, on their side, get it from the glass-blowers, or purchase it from the cow-doctors, quacks, or mountebanks. The poison-eaters have a two-fold aim in their dangerous enjoyment; one to obtain a fresh, healthy appearance, and acquire a certain degree of *embonpoint*. The number of deaths in consequence of the immoderate enjoyment of arsenic, is not inconsiderable, especially among the young. Every priest who has the cure of souls in those districts where the abuse prevails, could tell of such tragedies; and the inquiries made by Dr. Tschudi on the subject have opened out very singular details. The second object the poison-eaters have in view, is to make them, as they express it, "better-winded!"

—that is, to make their respiration easier when ascending the mountains. Whenever they have far to go, and to mount a considerable height, they take a minute morsel of arsenic, and allow it gradually to dissolve. The effect is surprising; and they ascend with ease heights which otherwise they could climb only with effort. The dose of arsenic with which the poison-eaters begin, consists, according to the confession of some of them, of a piece of the size of a lentil, which in weight would be rather less than half a grain. To this quantity, which they take fasting several mornings in the week, they confine themselves for a considerable time; and then gradually, and very carefully, increase the dose according to the effect produced. A strong, hale man, upwards of sixty, takes at present at a dose a piece of about the weight of four grains. For more than forty years he has practised this habit, which he inherited from his father, and which he in his turn will bequeath to his children. It is well to observe, that neither in these nor in other poison-eaters is there the least trace of an arsenic cachexy discernible; that the symptoms of a chronic arsenical poisoning never show themselves in individuals who adapt the dose to their constitution, even although that dose should be considerable. It is not less worthy of remark, however, that when, either from inability to obtain the acid, or from any other cause, the perilous indulgence is stopped, symptoms of illness are sure to appear, which have the closest resemblance to those produced by poisoning from arsenic. These symptoms consist principally in a feeling of general discomfort, attended by a perfect indifference to all surrounding persons and things, great personal anxiety, and various distressing sensations arising from the digestive organs, want of appetite, a constant feeling of the stomach being overloaded at early morning, an unusual degree of salivation, a burning from the pylorus to the throat, a cramp-like movement in the pharynx, pains in the stomach, and especially difficulty of breathing. For all these symptoms there is but one remedy—a return to the enjoyment of arsenic. According to inquiries made on the subject, it would seem that the habit of eating poison among the inhabitants of Lower Austria has not grown into a passion, as is the case with the opium-eaters in the East, the chewers of the betel-nut in India and Polynesia, and of the cocoa-tree among the natives of Peru. When once commenced, however, it becomes a necessity. In some districts sublimate of quicksilver is used in the same way. One case in particular is mentioned by Dr. von Tschudi, a case authenticated by the English ambassador at Constantinople, of a great opium-eater at Brussa, who daily consumed the enormous quantity of forty grains of corrosive sublimate with his opium.

In the mountainous parts of Peru the doctor met very frequently with eaters of corrosive sublimate; and in Bolivia the practice is still more frequent, where this poison is openly sold in the market to the Indians. In Vienna the use of arsenic is of every-day occurrence among horse-dealers, and especially with the coachmen of the nobility. They either shake it in a pulverized state among the corn, or they tie a bit the size of a pea in a peace of linen, which they fasten to the curb when the horse is harnessed, and the saliva of the animal soon dissolves it. The sleek, round, shining appearance of the carriage-horses, and especially the much admired foaming at the mouth, is the result of this arsenic-feeding. It is a common practice with the farm-servants in the mountainous parts, to strew a pinch of arsenic on the last feed of hay before going up a steep road. This is done for years without the least unfavorable result; but should the horse fall into the hands of another owner who withholds the arsenic, he loses flesh immediately, is no longer lively, and even with the best feeding there is no possibility of restoring him to his former sleek appearance. [The preceding extraordinary statement is abbreviated from a recent number of *Chambers's Edinburgh Journal*, in which it is given as authentic. The use of arsenic in improving the condition of horses is not unfrequent in this country, and its value in the cutaneous diseases of man is established. Such facts, in some degree, confirm these statements; but we entertain grave doubts that an agent of such uniform power as arsenic, could be commenced and habitually continued, in the large doses here mentioned, without producing effects the converse of those described.]—*London Lancet.*

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# RECORD OF MEDICAL SCIENCE.

## SURGERY.

*Case of a Foreign Body in the Air-Passages; Tracheotomy performed for its removal. Expulsion of the body twenty-eight days after the Opetion, and recovery of the Patient.* By DAVID JOHNSTON, A. M., Surgeon to the Royal Infirmary, Montrose.—On Monday, May 5, 1851, John C——, aged fifteen, a clerk in a railway office, came from the country, a distance of nine miles, and applied to me for relief, relating the following circumstances:

Between seven and eight o'clock in the evening of the previous Thursday, May 1, while sitting with a sister, cracking and eating hazel-nuts,

something occurred to cause a hearty fit of laughing, when he had a piece of nut-shell in his mouth, and the sudden inspiration caused the shell to disappear from the mouth and pass into the stomach, as he supposed. He was immediately seized with a paroxysm of suffocating cough, which lasted nearly an hour, and which left him in a state of extreme exhaustion. He slept during the night, although much annoyed with cough. Next day he felt pain about the throat, but no difficulty in swallowing. Towards evening his breathing became croupy and his voice husky. On Saturday, a surgeon who saw him administered an emetic, and passed a probang into the stomach, but found the œsophagus free from any obstruction.

When seen on Monday, the breathing was croupy and labored, and so loud and rough, that it could be heard outside the apartment in which the boy was; the voice was husky and could not be raised above a whisper; there was a constant hacking cough, accompanied by a little frothy expectoration; he complained of acute pain, increased by pressure, in the trachea, about an inch above the top of the sternum, and stated that the pain was more in the situation of the larynx during the two first days of his illness. He complained also, of a feeling of constriction in the chest, and of pain in the left side, referred to the neighborhood of the nipple. The skin was hot and dry, the pulse 108, and the respirations 24.

When stripped, the expansion of the thorax during inspiration was seen to be less complete than natural, and the ribs of the left side depressed. On applying the stethoscope over the trachea, a loud hoarse sound was heard, both during inspiration and expiration. The respiratory murmur was more audible over the upper part of the right lung than the left, and percussion also yielded a clearer sound over the right than the left side.

The diagnosis formed after this examination was, that the nut-shell had passed into the trachea, and that its outline being probably irregular and serrated, it had become entangled either in the trachea, at the spot where pain was felt, or in the left bronchus.

The serious nature of the case was explained to the boy and his friends, and it was recommended to them that he should remain in Montrose, where more speedy access could be had to assistance at any time, than in the country, at a distance of miles from any medical practitioner. To this proposal they assented.

May 6th.—Morning: Has had little sleep during the night, on account of cough, which is constant, but which does not occur in paroxysms; is unable to lie on either side; feels occasionally as if suffocation was impending, and obliged to start to the upright position; the countenance is anxious and pale, pulse 120. Evening: no better; was seen by a professional friend, who concurred with me in recommending tracheotomy, which was to be performed early next morning should no relief occur till then.

7th.—Eight A. M.: This morning, the seventh day after the occurrence of the accident, I opened the trachea, assisted by Messrs. Law-

rence and Niddrie, surgeons. Fearing the probability of a considerable amount of blood finding its way into the air passage, it was deemed prudent to withhold chloroform. An incision of two inches in length was made exactly in the mesial line, between the cricoid cartilage and the sternum; a large turgid vein, which ran obliquely across the upper extremity of the wound along with the isthmus of the thyroid gland, was raised upon an aneurism needle, and pulled upwards out of the way of the knife, and the skin and other coverings of the tracheal tube divided. There was not the slightest hæmorrhage, and the trachea was immediately seized by a tenaculum, and opened to the extent of an inch and a half. After the lapse of a few minutes, an attempt was made to ascertain by a probe the situation of the shell. The irritation caused by this proceeding gave rise to such a paroxysm of spasmodic cough, that it was found impossible to persist in the exploration. The patient was allowed to rest a little, and another attempt made, but with the same result. With such force was the bloody mucus expelled from the wound, that the ceiling of the room was completely bespattered with it. At this stage of the proceeding, chloroform was administered, and with the happiest result. The trachea was now carefully examined with a probe, both above and below the wound; a pair of curved forceps, such as are used for extracting nasal polypi, with the blades closed, were introduced both into the right and left bronchus, but no foreign body could be detected. The little finger was passed upwards into the larynx, and its cavities examined; the tube, as far down as the bifurcation, was also hurriedly examined by the finger. The fauces and pharynx were also carefully explored, but still the object of search could not be found. All oozing of blood having ceased, the wound was now closed by stitches, covered with a pledget of lint soaked in tepid water, and the patient put to bed. Four P. M. No better: air and mucous escaping freely through the wound between the sutures; complains of sharp pain in the left side, in the neighborhood of the nipple; pulse 120; skin hot and dry; was again subject to the influence of chloroform, and the air-passages once more carefully examined, both with the finger and probe, with no more satisfactory result than before. The wound was more loosely closed than in the morning, and a dose of sulphate of magnesia with tartarized antimony was ordered to be taken in two hours. Nine P. M. Medicine has acted well; still complains of pain in the left side, and of a feeling of tightness over the whole chest; much teased with cough, which aggravates the pain; unable to expectorate on account of the escape of air through the wound; can only speak in a whisper; respiration abdominal. To have twelve leeches applied under the clavicles, and the following powder every three hours: submuriate of mercury, two grains; tartarized antimony, one eighth of a grain; compound ipecacuanha powder, two grains and a half.

8th.—Morning: has slept little; pain in side less severe; other symptoms much the same. The sutures were removed to allow free escape of mucus from the wound. Takes a little tea and toast. Evening: has been sick with the powders, but has not vomited.

9th.—Has passed a more comfortable night; can lie on either side to-day, but feels easier on the right; the chest expands very imperfectly, and the left side is flattened; the sounds are the same as before the operation. Pulse 100. The gums are beginning to get tender. He was ordered to take the powders only thrice daily, to have a dose of sulphate of magnesia immediately, and a blister under each clavicle.

10th.—He feels better, and his bowels have been freely opened; gums sore; copious discharges of mucus from the wound, but cannot expectorate by the mouth; still unable to speak, except in a whisper; pain in the side gone; has never felt the acute pricking pain in the throat since the operation; less stridulous and noisy. Pulse 96. Cough still very troublesome. To have a powder twice daily, and a tablespoonful, frequently, of the following mixture:—Syrup of squills, one ounce; ipecacuanha wine, two drachms; weak solution of morphia, one drachm and a half; camphor mixture, six ounces and a half.

11th.—Slept soundly five or six hours last night, and is beginning to relish food, which has been entirely farinaceous; still much annoyed with cough, and unable to lie on the left side, except for a few minutes; both blistered surfaces secreting pus freely, and wound granulating; the outward aspect of the thorax, as well as the sounds, continue without improvement. Pulse 80. Omit the powders, continue the expectorant mixture, and take a dose of castor-oil when necessary. To have beef-tea and an egg daily.

12th.—Same as yesterday: although the dulness and absence of respiratory murmur, as well as the flattened and immovable state of the left side of the thorax continued, the patient seemed to improve; his cough diminished, the breathing became more natural, the countenance lost, in a considerable degree, its anxious expression, the appetite returned, and he was able to pass nearly the whole of the day out of bed. This improvement went on progressively until the 17th, the day on which he ceased to breathe through the wound, and on which his voice recovered its natural tone; when all the amendment which had taken place was immediately dissipated, and the same train of inflammatory symptoms occurred which had proved so troublesome immediately after the operation. The same kind of treatment was again resorted to, and by the 31st the severity of the symptoms were again subdued. On that day a small abscess was opened on the left side of the neck, which discharged about a tablespoonful of pus.

June 4th.—This afternoon, between five and six o'clock, the patient was seized suddenly with a severe lacinating pain in the chest, behind the lower part of the sternum, accompanied by a paroxysm of cough, so severe that the by-standers expected instant dissolution. This lasted for twenty minutes, during which time I was sent for. By the time I arrived, however, all the symptoms of impending suffocation had vanished; and I had the satisfaction of finding the patient with the nut-shell, which had been such a source of danger and distress to him, in his hand instead of in his chest, where it had remained for a period of thirty-five days. It had been expelled by the mouth in coughing.

He now continued to improve steadily until the 13th of June, when he left Montrose for the country, with the wound almost cicatrized. When examined at this date, the cough and dyspnœa had altogether left him, but there still remained a degree of immobility of the parietes of the left side of the thorax, and the respiratory murmur was not so distinct on that as on the opposite side.

17th.—The young man was seen to-day, his chest examined, and no indication of disease found. The fragment of shell had an irregular, oblong form, and a rough, notched edge. It measured half an inch in length, and three-eighths of an inch across the widest part of its narrow diameter.

*Remarks.*—The history, as well as the physical examination of this case, left no room to doubt its nature, although the patient himself imagined that the shell had been swallowed: the immediate attack of suffocating cough, the continuance of dyspnœa, and other symptoms of interruption of the functions of the respiratory organs, after the œsophagus was found free from the presence of the shell, indicated its lodgment in some part of the air-passages. This opinion was confirmed by the aids afforded by the stethoscope and percussion. The uneasy feeling experienced by the boy about the middle of the trachea, seemed to indicate the probability of its being entangled in the mucous membrane in that situation, (and this had probably been the case during the first days of illness;) but the sounds produced by respiration and percussion, as well as the depressed and immovable state of the parietes of the left side of the thorax, pointed out with greater precision the left side of the bronchus, or some of its subdivisions, as the seat of fixture. All the symptoms led to the opinion that the shell was immovable; and its probable shape tended to strengthen this idea.

The amount of improvement which took place between the abatement of the inflammatory symptoms and the 17th of May, was calculated to lead to the belief that the offending body had been ejected unobserved along with the bloody mucus which was so forcibly expelled during the introduction of the probe before anæsthesia was induced; but the continuance of the unnatural position of the left lung, militated much against this opinion.

The blades of the forceps which were used to explore the bronchi, measured three inches and a half in length, and were introduced into each bronchus as far as the joint. It is possible that the shell, lying with its concavity closely applied to the mucus surface of the canal, and with its smooth convexity outwards, may have escaped detection with the forceps used as a probe; but the likelihood is that the body lay fixed deeper in the chest than it was possible to introduce them. It is almost impossible that it could have been undetected in those parts searched with the finger—viz., the cavity of the larynx and the whole length of the tracheal tube. It was obviously an oversight to close the wound, as the opening in the trachea afforded the patient the only available safeguard against suffocation, should the shell have suddenly

become impacted in the rima. This error was, however, remedied on the morning after the operation.

This case serves to illustrate what is perhaps a novel application of chloroform. By a little delay, there is no doubt but the air-passages would have become enabled to endure with less resistance the irritation caused by the introduction of instruments, but never to allow of the accurate and prolonged examination, both by the probe and the finger, which was instituted. If the trachea of the patient is sufficiently large to admit the finger, and the wound sufficiently extensive to allow plenty of space for the carrying on of respiration after its introduction, the canal above the wound may be as carefully examined with the best and most delicate of all probes, as the mouth or fauces, without the slightest risk to the patient. The examination of the tube downwards must be performed hurriedly, and of course less satisfactorily. Notwithstanding the handkerchief held to the mouth and nostrils was repeatedly charged with chloroform, even to saturation, it was found impossible to induce insensibility until a sponge charged with the anæsthetic was applied to the wound.

Although the patient in this instance derived no benefit from the performance of tracheotomy, the risks he evidently encountered, and the termination of the case, clearly show that the operation was indicated. Some object to the performance of this operation under such circumstances as those related, except when the symptoms are imminent, from the fact that foreign bodies are often expectorated. But it is a fact equally well known, that in general, if they are allowed to remain for any length of time in such a situation, the constant irritation their presence gives rise to is the cause of serious mischief, which even their expulsion by expectoration fails to prevent from terminating in death, which, in such cases, is most frequently caused, not by suffocation from the foreign body getting entangled in the rima, or from any other sudden termination, but from phthisis, bronchitis, or some other tedious and destructive disease being induced by this cause.—*London Lancet.*

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*Removal of a Nævus by a Platinum Wire, heated by a Galvanic Current.*—Our readers probably remember the cases of fistula in ano and hæmorrhoids successfully treated by Mr. Marshall, at University College Hospital, with the platinum wire, made red hot by a galvanic battery. We perceive that Mr. Hilton has been trying this plan of cutting and searing at the same time upon a nævus of the flat kind, situated in front of the ear of a child two months old. The operation was performed with Cruikshank's battery and a very thin wire, which it was first intended to tie around half the tumor, which was about the size of a crown piece. But the wire ran so easily through it, that the whole was completely removed, and the parts are now fast cicatrizing. This is rather a quicker measure than the ligature, and just as secure, since hæmorrhage is so rare.—*Ibid.*

*A Substitute for Mercury in Syphilitic Diseases.*—M. E. ROBIN has read a paper before the Academy of Sciences of Paris, with the following title:—"On Certain new Agents calculated as Substitutes for Mercury when used as an Anti-syphilitic Remedy." In former papers, M. Robin has maintained these propositions:—"Mercurial preparations do not act in a peculiar manner when administered in Syphilitic diseases; they merely combine with the virus and change it into a new or inert compound. Now there are a great many substances which form analogous combinations with organized matter, which substances probably have, like mercury, anti-syphilitic virtues; and it will be found that the agents of this class, which have thus been successfully employed, belong to the antiseptic division of remedies which act by combining with the noxious principles. In this manner we can understand whence arise the anti-syphilitic properties of arsenical, gold, silver steel, and antimonial preparations. Hence arises the likelihood of success, if attempts be made to use such organic substances as the bichromate of potash, or sesquichloride of iron, instead of mercurials."

M. Robin induced Dr. Vicenti, of Paris, to try a few experiments with the bichromate of potash to combat syphilis; the salt was employed in three cases with much success, and of these, one was marked by very severe secondary symptoms. Fifteen grains of bichromate were divided into eighty pills, with extract of gentian. One of these was taken night and morning. They agreed pretty well with the stomach, though some opium was necessary to prevent nausea and vomiting. The patient took 240 pills in the space of about three months, and was then quite well of a very intense attack of iritis, accompanied by other syphilitic symptoms, which had almost blinded him. The patient had had an indurate chancre, and had never taken any mercury.—*Ibid.*

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*Dr. Lebert on the Structure of Cataract.*—DR. LEBERT stated, a short time ago, before the Surgical Society of Paris, that he had no faith in certain ammoniacal preparations which had been supposed capable of producing resolution in case of incipient cataract. He examined crystalline lenses somewhat altered in structure, and found very important changes. In hard cataract, for instance, there was an opaque, granular substance interposed between the lamellæ of the lens; this substance is beyond the action of the absorbents, as the lamellæ themselves are horny and atrophied. In soft cataract there is seen in the crystalline cells an effusion of a milky fluid, and in this fluid crystals of cholestearine can be distinguished, the lamellæ being at the same time softened and hypertrophied. None but a surgical treatment can, in such cases, be followed by a successful result. It was shown during the discussion that those cases which were benefitted by Gondret's ammonical ointment, were not cases of incipient cataract, but instances of an early stage of amaurosis.—*Ibid.*

## PATHOLOGY AND PRACTICE OF MEDICINE.

*Hereditary Insanity.*—Dr. Moreau (de Tours), Physician to the Bicêtre Hospital at Paris (for old insane men), has read before the Academy of Science, an important paper with the following title:—"On hereditary predisposition to cerebral affections.—Can this predisposition be recognized by any particular signs?" The author rests his reasoning principally on comparative anatomy; his views may be condensed as follows: Constant and invariable laws regulate the manner in which the organization of the parents is transmitted to the offspring; hence arises likeness. The latter is not handed down in the shape of a few isolated features, but by the transmission of two great series of organs, which series are perfectly defined and distinct. One of these series includes the external form and configuration; the other regulates nervous functions. The transmission takes place according to fixed laws: when one of the parents communicate one series, the second parent transmits the other.

Passing afterwards from animals to man, and applying the above laws to human beings in their pathological order, Dr. Moreau has found that, in the majority of cases, when an hereditary similarity to *one* of the parents has been made manifest by certain pathological alterations of that portion of the nervous system which ministers to the intellectual faculties, the distinctive characters of that series of organs which preside over the expression of the face—viz., the vulgar acceptation of likeness—will not fail to have been transmitted by the *other* parent. This assertion is supported by 164 cases in a given number of 192.

The author, therefore, considers as demonstrated: 1st. That the law of hereditary transmission, according to series of organs, is founded upon truth, within certain limits, both as regards men and animals. 2d. That the transmission of cerebral disturbance and of the physical likeness may be effected by either parent, but most often by one of them only. 3d. That a family being given, among whose stock there have been one or more individuals affected with insanity, it is very probable that the hereditary disease will settle in preference upon such of the children as have little or no physical likeness with the relatives in whom the disease has originated; and that the mental affection will, on the contrary, not affect that portion of the offspring who bear to those relatives a more or less striking physical likeness.

We would here merely remark, that the above assertions are well worthy of investigation and discussion, as it is evident that prophylaxis would in some degree become easy, if these positions turn out perfectly correct.—*London Lancet.*

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*Poisoning by Datura Stramonium.*—By Dr. Brewerton of Doncaster.—Early in the afternoon of the 14th of October, I was summoned to see two children of the respective ages of five and three years, who were described by the messenger as having suddenly "gone out of their

heads." They had been picked up in the street in this state, and carried into the house of the stranger.

I immediately recognized the symptoms of poisoning by one of the *Solaneæ*. The face was flushed; the eyes were staring and brilliant, and the pupil was fixed and excessively dilated. There was complete loss of vision, imperfect control over voluntary muscular action, and violent delirium, which was alternately mirthful, furious, or dolorous, directed to some imaginary source of pleasure, or repugnance, and accompanied with corresponding gesticulations. The tongue was occasionally thrust from the mouth, and the throat, which appeared to be the only sensible seat of discomfort, was grasped and torn by the hands, as if the patients imagined it to be oppressed by some foreign body. Their attention could not be aroused to anything which was said, and they resisted all attempts at interference with piteous cries or violent struggling.

I suspected the poison of belladonna, and caused search to be made in the neighborhood for the berries of that plant, administering emetic doses of sulphate of zinc in the meantime. The patients exhibited apparent reluctance to swallow, keeping the jaws rigidly closed, and resisting the administration of the remedy with their hands, though they were not sufficiently conscious properly to direct such efforts. The stomach was slow to act, but after considerable perseverance vomiting was induced. Numerous seeds of *datura* were detected in the ejecta; indeed a much greater quantity than has been known to cause death.

It seemed, from the search which had been made, that the poisonous herb had been thrown out from a neighboring garden, and several emptied and divided thorn-apples were discovered. A third child confessed to have eaten a smaller quantity of the seeds, and she was slightly though not alarmingly affected. The poison having been retained four or five hours when vomiting took place, a sharp aperient dose was administered, which, after some hours' delay, acted moderately. Cold was from the first assiduously applied to the head.

At five p. m. four hours from my being first called, though the symptoms were somewhat abated, vision and consciousness to external things were not restored, and the delirium returned at intervals with nearly all its previous violence. The parents of the children, who were now present, were not noticed by them, save occasionally to be embraced or attacked for some imaginary benefit or injury. I subjected the patients to a shower-bath, and applied a blister to the back of the neck.

At nine vision was partially restored in the elder child, and the *hallucinations* were in a great measure supplanted by *illusions*, which indicated some return of consciousness.

At eleven the delirium had become of a muttering type; the patients were drowsy, and displayed a comatose tendency. In the elder child *the pupil, though contracted in the dark, gradually dilated to the stimulus of light.* Sinapisms were now applied to the feet, calves, &c. Alternate doses of strong tea and ammonia were given; the face was occasionally sprinkled with water, and other means were used to prevent sleep.

At five o'clock the ensuing morning, the victims were allowed to sleep, and both awoke before noon, perfectly conscious and well.

On the morning of the third day, the body of the younger child became covered with a small papular eruption, which continued for several days, accompanied with fever.

The effects of the poison were *purely nervous*. The *cerebrum* was first affected; hence arose perverted vision, illusive delirium, and, as consciousness diminished, pure hallucinations. The derangement next attacked the *cerebellum*, as was shown in the loss of control over voluntary muscular action.

Finally, the *medulla spinalis* was implicated, as was evinced by the spasmodic motions of the extremities, &c. In each organ, the first effect seemed to be *stimulation*. This was followed by *perversion*, and lastly, by *depression*, and threatened *extinction* of the function.

It is then incorrect, with such evidence as the above recorded symptoms present, to class *datura* among the *narcotico-irritant* poisons. This term has been vaguely applied by toxicologists to several poisons which are in no proper sense of the term irritants; and which only differ from the *narcotics proper*, either in affecting more peculiarly the spinal cord, or in the stimulating effects—the first result of all narcotics—being more marked or of longer continuance than the narcotism which follows. Death may even occur from over stimulation, before the depression sets in. I have, for instance, poisoned animals with Indian hemp, some of which have died in a state approaching to *tetanus*, while others have survived this state to perish by *coma*, or, at least, by *nervous depression*. It is probable that a poisonous dose of *strychnine*, if it did not first kill by over-excitation of the spinal cord, would eventually do so, like *aconite*, by depression of that organ.—*Prov. Jour. from Dublin Med. Press.*

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*Causes of Albuminous Urine.*—M. Ed. Robin lately read a paper on the above subject before the Academy of Medicine of Paris; we subjoin an abstract of the same:—In the normal state the albumen is burnt in the blood, and the nitrogenized residue of this combustion—viz., urea and uric acid—is eliminated by the urine. The combustion is, however, not so complete as not to allow some little albumen to escape with the renal secretion; but this albumen, besides being very small in amount, is somewhat different from the ordinary kind. M. Robin thinks that if during a sufficiently long time the albumen underwent in the circulation a much smaller amount of combustion than is habitually the case, it might pass unaltered into the urine, instead of being thrown off in the form of urea and uric acid. The author cites the following facts in support of his opinion:—

The urine becomes albuminous in croup, in complete ascites, and in cases of capillary bronchitis, with emphysema, accompanied by much dyspnœa; in pulmonary phthisis, especially when complicated by pneumonia and marked with difficult breathing; in gestation, when sufficiently

advanced to occasion an habitual congestion of the kidneys, owing to an impeded abdominal circulation; and in such states of the system in which a very incomplete respiration causes a marked diminution of combustion. The urine is also albuminous in cyanosis, of whichever nature it may be; in affections of the heart when they exist in such a degree as to keep the patients in a state of semi-asphyxia; and, of course, in such cases where an obstacle to the circulation of the blood, or a malformation of the heart, prevents the hæmatosis from being as rapid as under ordinary circumstances. The urine is likewise albuminous in idiopathic or traumatic lesions of the nervous centres, which cause a lowering of temperature, and thereby a marked decrease of combustion; in diabetes, a disease where very often a lesion of the nervous centre seems to be the origo mali; where the great abundance of sugar in the blood seems to be an obstacle to the combustion of albumen; and where finally the natural heat is lowered by one or two degrees with patients who are severely affected. The urine is albuminous in that kind of nervous exhaustion which characterizes the state of frame called lumbago, which exhaustion must be connected with a great diminution of calorification, and slow combustion. The urine is likewise albuminous in consequence of severe exposure to cold of a large surface of the body. Finally, Bright's disease, where the urine is always albuminous and anæmic, is especially attributed to many of the causes which have been above enumerated as capable of exciting the passage of albumen into the urine.

The author continues by stating that some useful data may be obtained from comparative physiology. As a general rule the urine of the common mammalia and of birds contains no albumen. Among reptiles, on the other hand, the batrachia, so remarkable by the low temperature of their animal heat, yield urine in which albumen is always to be found. It now remains to be proved, says M. Robin, that the urine becomes albuminous under the influence of such agents as interfere in a marked degree with slow combustion. The author then adduces the following conclusions:—

When the activity of the combustion which takes place in the blood is too feeble to burn the whole of the albumen which, in the normal state, should be consumed in a given time, the general vitality is diminished, and thus more or less albumen is allowed to pass unaltered into the urine,—viz., just so much organic matter as escapes the transformation into urea or uric acid. The proportion of urea contained in albuminous urine should therefore be smaller than it is found in normal urine, and such is found to be the case in the following diseases, the only ones, according to the author, in which experiments have been made—viz., pulmonary phthisis, diseases of cerebro-spinal axis, extensive and acute bronchitis with intense dyspnœa, and Bright's disease.—*London Lancet.*

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*Strangulated Hernia Reduced during Vomiting.—L' Union Médicale* mentions that Dr. Kuttlinger, of Erlangen, in Germany, tried the taxis upon a woman sixty-four years of age, whose crural hernia was strangu-

lated; but without success. The patient was soon attacked with vomiting, and whilst she was making efforts, Dr. Kuttlinger seized the tumor, pressed it with some force, and succeeded in reducing it in the very midst of the straining. Three months afterwards strangulation occurred again, the taxis was tried in vain, and reduction was effected exactly in the same manner as before.—*Ibid.*

## ANATOMY AND PHYSIOLOGY.

*Why is a true Corpus Luteum formed only in cases of Impregnation.* By Dr. ALEXANDER HARVEY.—Taking it for granted that the assumption is a true one that a *genuine* corpus luteum does only occur in impregnation, though a *false* one appears after each oviposit, the author seeks for a reason, and finds one in the following explanation:

1. When a mature ovum is impregnated, provision is forthwith made to retain it in utero, and both ovum and uterus become the seat of active vital processes, which cause a prolonged determination of blood to the reproductive organs. The ruptured ovisac participates in this afflux and the organizable deposit which it contains is placed under circumstances favorable to the exercise of its inherent powers of growth, and thus it becomes developed into a true corpus luteum.

2. On the other hand, when the ovum is not impregnated, it is thrown off in the menstrual discharge, no prolonged afflux taking place as in the former case; the organizable deposit is not favorably placed for further development, and a *false* corpus luteum is the consequence.—*Monthly Jour. of Med. Scien. from Prov. Med. and Surg. Jour.*

*On the Employment of Sulphate of Zinc as an Antiseptic.*—M. Falcony states, as the result of his experimental researches, that sulphate of zinc is not only eminently antiseptic, preserving animal substances from decay, but that it actually arrests the progress of putrefaction which has once commenced. The injection of four or five quarts of the solution of this salt in water, through the arteries, suffices for the preservation of a human body, in a state of perfect flexibility for upwards of forty days. Anatomical preparations thus made, will serve for dissection for a considerable period; the use of the solution not affecting the steel instruments employed. M. Falcony has also found, that preparations which have undergone change by maceration, resume their original character when immersed in a solution of sulphate of zinc.—*London Med. Times.*

*Monstrosity.*—M. Bérard lately brought to the Academy of Medicine two lambs yeaned at the full period, which presented but one head. The neck was also single, but by compressing it, two vertebral columns might be felt; the sternum of each animal was soldered to the same bone in the other, and the upper part of the abdomen of each lamb was also connected. There were two distinct hearts, one being rudimentary, and situated anteriorly and to the right side, the other strong and large, posteriorly and to the left side. There were also two livers, one large on

the right side, the other smaller to the left, the first of these organs receiving the umbilical vein, which came from the fœtus on the left. The disposition of parts within the skull was highly interesting, and was thus described:—Each spinal marrow enters the head by a distinct occipital hole, and the duality still persists within the head, which externally seems but single. There are two pontes Varolii, two calami scriptorii, there is a fourth ventricle on each side, and two cerebelli, which are connected in the mesian line. Higher up there is quite a collection of corpora quadrigemina, four of them in the centre quite in the normal state, and one situated on either side of this mass. The duality, however, ceased at that spot, for further on there is but one optic thalamus, one corpus striatum, and finally two hemispheres as might be seen in a slight fœtus.—*London Lancet.*

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*On the Transportation of the two Aortæ into one in Embryonic Vertebrata.*—M. SERRES read a paper before the Academy of Sciences of Paris, on the 22d of December, wherein he confirms the experiments of Dr. Allen Thompson and Mr. Milne Edwards, touching the time of embryonic life, when the originally double aorta is conjoined into one. M. Serres placed the embryo chicken with the omphalo-mesenteric membrane on a plate of glass; as the action of the air and cold arrests the circulation, the blood becomes coagulated in the vessels, the transparency of which allows the sanguineous injection to be seen. By means of a series of preparations thus arranged, the above-mentioned union is seen to take place towards the middle of the dorsal region from the fiftieth to the sixtieth hour; it then extends upwards from the sixty-fifth to the seventieth hour, and progresses downwards from this latter period. Thus, at the end of the third day, and, at the latest, of the eighty-fifth hour, the two arterial trunks are united, and form but one vessel.—*Ibid.*

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## MATERIA MEDICA AND THERAPEUTICS.

*Tartaric Acid used for aiding the solution of Disulphate of Quinine.*—A few drops of dilute sulphuric acid will, as is well known, aid to dissolve disulphate of quinine, but the taste of the mixture is then very bitter and disagreeable. Messrs. Bouchardat, Righni, and Ruspini advise tartaric acid to be used for the purpose of hastening the solution of the quinine instead of sulphuric acid; and M. Casorati has found that one grain of the tartaric acid is sufficient to saturate three of disulphate of quinine, the compound being then a sulpho tartrate of quinine, and not at all unpleasant to the taste.—*London Lancet.*

THE

# MEDICAL EXAMINER,

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NEW SERIES.—NO. LXXXVIII.—APRIL, 1852.

## ORIGINAL COMMUNICATIONS.

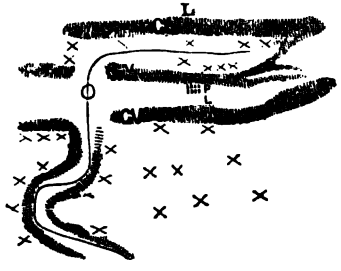
*Medical Topography, with Observations on the Epidemic Dysentery of Lancaster County. With a cut.* By D. H. Agnew, M. D., Philadelphia.

To prosecute our inquiries into the regions of epidemic causation with any prospect of success, the medical topography of a country should be made the first matter of consideration. Every physician who has devoted a few years to the active duties of his profession, will have discovered a tendency in certain diseases to apportion particular districts to their exclusive domination. The expression of such well marked local predilections, suggests at once the existence of some local principle favorable to their production; while their periodical visitations no less strongly prove the necessity for certain meteorological conditions to quicken them into activity. Now although we may not be able, by our present knowledge and means of observation, to isolate this subtle principle, or compel a respondence even by the most delicate reagents; still, with the overwhelming evidence before us, we are bound to admit its existence, and regret only the imperfection of

our analysis. When we glance at the wonderful results obtained by physicists in the various departments of physical science, not only in their investigations of the more gross forms of material substances, but in the appreciation and mathematical measurements of even those infinitessimal undulations of ether, which give rise to certain modifications of light, we have the greatest encouragement to believe that even the tenuous and highly sublimated principle of contagion will yet succumb to the triumphs of modern chemistry. If it be true then that disease can be localised, and indicated by geographical lines, undoubtedly a study of the physical peculiarities of such regions would be calculated to throw much valuable light upon their etiology. There is a prevailing expression among medical men, and obvious even to the eyes of the vulgar, that diseases have changed, and the natural interrogatory arises, to what are we to attribute this change? Judging from observations made in my own district, and which are submitted in a brief and cursory manner, I am forced to believe the explanation resides in the physico-moral history of a neighborhood. In the locality referred to, many years ago, intermittent and remittent fevers were the prominent and prevailing affections. The points which they respectively occupied, exhibit in a striking degree the dependence of each upon the same morbific cause, and it seems exceedingly probable that the degree of miasmatic concentration alone determines the type of fever. This may be modified either in consequence of the limited supply of productive materials, or locality. In elucidating the above, I will state that there existed in this region several quite extensive marshes. On the low grounds or valleys, contiguous to these sources of pestiferous emanations, intermittent cases greatly preponderate; while on the more elevated grounds, remittent fevers alone exist, showing a modification in its sensible effects either by admixture or altitude. The influence of locality was most decidedly expressed, in another portion of the same district, where those families residing on the east side of a marshy portion of ground were invariably affected with ague, whilst the inhabitants on the west, many of whose houses were on its very verge, entirely escaped. These facts I attributed to the currents of air. During clear weather the north-western winds prevail, wafting these paludal exhalations over the dwellings of the eastern resi-

dents. On the other hand, when the contrary or eastern winds existed, they were generally accompanied by rain, and those meteorological conditions of air, light and heat unfavorable to either the elimination or diffusion of miasm. As the population increased, and a spirit of agricultural enterprise arose, giving an impetus to the value of property, a system of drainage was commenced with a view to the reclamation of these unproductive spots; the consequence was, that in a short time such malarious sources began rapidly to disappear. In proportion as the swamp extermination proceeded, did intermittents decline, and the remittents which previously occupied the ridges and their declivities, descend into the valleys. Even after the complete removal of the stagnant accumulations of water, these still furnished materials for the production of a certain amount of malaria, in consequence of the streams which flowed through them being narrow and tortuous, and thus rendered inadequate to conduct away any unusual accumulations of water which occurred during violent rains. At such periods large quantities of decomposed organic matter were carried down by the swollen tributaries from the hill sides; and the main channel overflowing its banks, a rich deposite was left upon its subsidence, to be acted upon by solar heat. In the mean time the profits arising from grazing cattle began to attract the attention of agriculturists; the meadow lands, from the character of their grasses being eminently adapted for this purpose, assumed a new degree of importance, and measures were put at once into operation, to render them as valuable as possible by widening and straightening their channels. By this improvement they seldom overflow; and for the last few years, remittent fever has almost entirely disappeared. The present affections which, from their numerical strength, rise to the rank of prevailing or epidemic diseases, are typhoid fever, and dysentery. The exanthematous class, originating as they do, in a specific poison, and communicable by contact, of course it is not presumed to make them dependent upon any local influences of a physical character. The employments, and alimentation of our race at the present day, are calculated to develope the nervous unduly over the muscular system, and this very disproportionate distribution of nutrition may be rationally invoked to explain the prevailing typhoid complexion of our fevers. The

partiality manifest by colitis for those portions of my district marked upon the cut, I am disposed to attribute to geological causes.




*Explanation of cut.*

G represents the ridge known as the Gap; GV the two called the great valley hills. O the Octorara, a large stream arising between the hills G and G V, and and finally emptying into the Susquehanna above Port Deposite. P the village of Peningtonville on the Columbia R. R. L the limestone hill. And the asterisks (*) the portion affected with dysentery

The country represented here embraces a portion of Lancaster and Chester counties. It will be perceived that there are three chains of ridges running almost parallel with one another, and dividing the intermediate country into three distinct valleys. two of which, the most northern and southern, known as the Pequea and the Great valleys, are of very considerable extent, while the intermediate one, in consequence of spurs being sent off from the adjoining hills, is converted into a basin of a few miles. Within the northern and middle ridges, the tributary sources of the Octorara arise, the main stream of which is seen taking a course west and south, skirted with high hills on either side. The vallies, north and south, are limestone; and reposing against the southern declivity of the middle ridge, is seen the village of Peningtonville on the edge of the Great valley. In all the epidemics which I have witnessed of the disease, this village invariably furnished the first cases. In 1842 the disease commenced about the first of August. The month of July previous contained fifteen days of unfair weather, seven of which were showery, and from the 27th to the 31st the thermometer did not fall below 95° during the day. For a short time previous, various intestinal disorders presented themselves, foreshadowing its approach. The first cases occurred at Peningtonville, and from thence it extended north, invading all that portion of the neighborhood marked by the asterisks, to the Pequea valley, (a limestone district) where it was arrested by this apparent cordon sanitaire. Striding over the Great valley immediately in front of

the village, (also limestone,) it appeared immediately on its southern verge, and travelled in that direction far beyond the limits of my district. In 1844 it again appeared as an epidemic, commencing at the same point, and observing precisely the same route of invasion. The first cases occurred about the 5th of May, but did not extend very rapidly until toward the beginning of July, after which they greatly multiplied. The month of May previous, was analogous to that of the July preceding the epidemic of 1842, in having sixteen unfair days, seven of which were likewise showery. The months of June and July of the same epidemic were also singularly alike. Each had five days in which the average temperature was 97°; each had light cloudy, three wet and two foggy days. In the disease of 1842, a decrease in the number of cases occurred after the 13th of September; and on the 23d was brought to a sudden arrest by a brisk frost; no new cases took place after that date, and such as were laboring under an attack, commenced a rapid convalescence. In the one of 1844, the declension was very gradual and straggling; cases were seen until the weather became decidedly cool. Now, in neither of these visitations of the disease, did I have a single case occurring in the families of those residing in the valleys and using limestone water, and it is to this cause that I am disposed to attribute their exemption. In what manner limewater acts as a prophylactic is not easily explained; for with many, water thus impregnated deranges the bowels very considerably. The power of lime as a disinfecting and corrective agent, is generally admitted, and it may perhaps exert some alterative action in the system, rendering it insusceptible to morbid impressions of this character.

Why the colon should be the seat of disease in preference to any other portion of the intestinal canal, is another question of some obscurity. May it not be accounted for on the ground of difference of function? The small intestines are more exclusively the organs of absorption. The chyme being a bland unirritating mixture, rather protects the mucous coat of the bowel from injurious impressions than otherwise; while the large intestines being the receptacle of the excrementitious matter of alimentary substances (unfit for the purposes of nutrition) and the various secretions of intestinal glandulæ, are exposed to much greater

mechanical irritation, in addition to which the developement of gases arising from a degree of decomposition going on, may add to the efficiency of this cause.

The disease, as it prevailed in Lancaster county, commenced with the ordinary griping pains, frequent inclinations to evacuate the bowels, attended with straining, tender belly, and the discharge of a small portion of mucus of the consistence of jelly, and generally intermixed with streaks of blood. Others passed a thin brown fluid containing long, tough, and tenacious shreds, similar to the scrapings of guts. The tongue was sometimes loaded with a heavy brown coat; at others, dry and red; the heat of skin somewhat elevated above the natural standard, and in about 24 hours subsequent to such evidences of indisposition, a symptomatic fever set in. In those cases where but little blood appeared in the evacuations, the sufferings of the patients were much aggravated, and the tenesmus more annoying, amounting to tormina, and such appeared to indicate a higher degree of inflammation, and demanded the employment of active antiphlogistic remedies. When the bloody discharges preponderated, my impression was that the congestion and inflammation were, to a certain extent, relieved by this kind of local depletion.

*Treatment.*—On this subject, much diversity of opinion exists. The use of the lancet is viewed by many with great distrust, and not unattended with danger, while that of mercury as downright injurious, and deserving utter proscription. Some admit the propriety of occasionally administering a mercurial, merely with a view of stimulating the hepatic apparatus, but rely mainly upon opium for subduing the intestinal disease. While others discard, in the main, all the above, and treat every case by a thorough course of purgatives, either with a view to relieve the engorged state of the mucous membrane, or dislodge accumulations of hardened scybala, visible, in most instances, only to the eye of faith. The great reason why the abstraction of blood is not deemed requisite in this affection, arises, no doubt, from an under estimate of the grade of inflammatory action, and this is the rock upon which many an unfortunate patient is sacrificed. The truth is, the disease is one of intense phlogosis, otherwise it would be impossible to explain the organizations and extensive structural alterations revealed to the pathologist. The pulse,

though a pretty correct guide in most diseases, fails in many cases of dysentery to indicate the degree of danger; and hence, if we expect to find the full bounding vessel as in pleuritis, or the hard contracted one characteristic of peritonitis, we shall be very greatly disappointed. Again, if the administration of mercury be practised only under the idea that the liver is permanently affected in all cases of colitis, we think such will be doomed to disappointment, as the investigations of the ablest pathologists fail to establish hepatic complications, other than accidental to the general disorder. For many years back I have been induced to adopt the opinion, that in the secretions furnished by dysentery, we have the evidence of a peculiar form of phlogosis, analogous in many respects to that of croup, and most amenable to those remedies which exert a modifying power over the blood, or what may be termed antiplasmic agents. The efficiency of mercury, where such are indicated, is unquestionable, and it has always been with a view to its alterative action that I have prescribed it. In the management of colitis, two ends have been kept steadily in view, and the satisfactory results obtained confirm me in the course pursued.

First, the removal of all sources of irritation; and, secondly, alteration, both of the sanguine fluid and the secretory function of the parts involved. To effect these ends, when called to a patient, provided there exists much pain, tender belly, and the dysenteric discharges, I opened a vein and abstracted a quantity of blood sufficient to make a moderate impression upon the circulation, after which, a mild cathartic, such as the Oleum Ricini with xxx. gtt. Tinct. Opii were administered. By these means I got rid of several sources of irritation, as, for instance, a portion of the blood itself (which, when altered in its constitution, may act as any other foreign body,) thus enabling the engorged capillary vessels to empty themselves, and by the removal of all fœcal accumulations and morbid secretions. Having accomplished this, the next step was to place the intestines at perfect rest. By so doing we lower the demand for blood, diminish the depraved functional activity of the parts, and allow the process of repair to go on uninterrupted. In order to effect this, modify the blood and change the secretory action of the vessels. Opium, in combination with calomel, was next adminis-

tered. Sub. Muriat. Hydrarg. v.—vii. grs. Pul. Opii. vi.—viii. grs. Pul. Ipecac. vii grs. To be divided into four powders and one taken every three hours. If after a time, narcotization occur, the opium should be omitted and the calomel continued, resorting to the former again as soon as the condition of the patient will admit. If the tenesmus continued troublesome, an enema consisting of a little thin starch, to which was added one teaspoonful of Tinct. Opii, generally quieted the bowel. This reflex phenomenon, analogous in many respects to the expulsive efforts of the uterus, is one of the most distressing and harassing attendants of dysentery. In the use of injections to relieve this symptom care should be taken that a very small amount in bulk be employed, as otherwise the stimulus of distension may provoke the bowel to expel it. After the use of the above means, if much tenderness continued over the abdomen, cups were employed with the best results. Leeches would answer equally well, and perhaps in some respects better, but inability to command their use in the country prevented their employment. After the local abstraction of blood, the abdomen was covered by a light, warm, hop poultice, which by its derivative and anodyne effects will be found a very comfortable application to the patient. The drinks employed were barley water, infusion of the ulmus fulvia and benne leaves. This last named article seemed peculiarly appropriate. After the violence of the acute symptoms had passed over, and the bowels still continued to be intolerant of pressure, a fly blister was applied, and after its removal dressed with the ung. hydrarg. fortius. In cases where the discharges were mixed with much blood, the acetas plumbi constituted a valuable addition to the mercurial prescription in doses of three or four grains ; and, indeed, whether the evacuations were of this character or not, if the tongue became red, dry and glazed, the exhibition of lead had a decidedly good effect. For several years I have observed the efficacy of this article in subduing that condition of the mucous membrane of the intestines indicated by the red, dry and glazed tongue, not by any means peculiar to colitis alone, but frequently to be met with in typhoid fever, scarlatina, and as accidental in the course of other febrile affections. In such, it seemed to answer best when administered in solution. Pursuing the above plan, no sooner

did the system begin to acknowledge the specific action of the mercurial, than, in the great proportion of cases, the symptoms gave way and convalescence set in. The very mildest action was all that was necessary; and hence, as soon as the least tenderness of the gums or the mercurial fetor was observed, it was either suspended altogether, or, when considered requisite, given only at such intervals as would preserve the impression already made. Occasionally a case would prove rebellious, the stools become more frequent, containing membranous shreds, the belly retracted, the pulse fail, and a disgusting stench emanate from the patient, attended with a confused state of mind. Such a concurrence of symptoms betokened a very serious state of things, and when accompanied by the entire and sudden suspension of pain, likely to prove fatal. The treament adopted in these cases was such as would be calculated to sustain the general system and act upon the diseased surface, arousing, if possible, a degree of vitality sufficiently vigorous to insure its restoration. It is at such a crisis that an appropriate article of nutrition becomes necessary. The one employed was beef essence, and embodying as it does a large amount of nutritive matter in the smallest bulk, and the most unirritating form, we should be unwilling to exchange it for any other article of dietetics in general.

It is at this stage of the disease, as I understand it, that the favorite prescription known as Hope's Mixture is said to prove so curative, and notwithstanding it was employed with strong prejudices in its favor, it proved utterly powerless in my hands; neither did the employment of nitras argenti, so highly recommended in cases of extensive ulceration, produce any reliable results. That which undoubtedly displayed the most decided influence in this stage of the disease, was the following mixture: Ol. Terebinthinæ, ʒiss. Tinct. Catechu, ʒii. Tinct. Capsici ʒii. Tinct. Opii. gtt. xl.; Mucil. Gum Acaciæ ʒiv. Of this one tablespoonful was given every three hours, and likewise Sulph. Quiniæ grs. ij. every four hours, and where the strength of the patient was not too much exhausted, the belly and hips were immersed in a warm bath. Under this treatment, with an occasional dose of pulv. doveri, and the regular use of beef essence, the most encouraging results were obtained. The average dura-

tion of the disease was eleven days. The following table will exhibit the result of ninety-six cases as they occurred indiscriminately:

NINETY-SIX INDISCRIMINIATE CASES.

| *Age.* | *Number of Cases.* | *Mortality.* |
|---|---|---|
| Under 5 years, | 19 | 3 |
| " 20 " | 30 | 2 |
| " 50 " | 39 | 3 |
| Over 50 " | 8 | 0 |
| Total, | 96 | 8 |

The administration of even the mildest aperients was not resorted to after the commencement of the disease, unless under certain peculiar circumstances; as, for instance, where the opium effectually blocked up the intestinal discharges for forty-eight hours or more, and even then I much preferred an enema of simple warm water, or warm flax-seed tea, when such had the desired effect; or where the disease attacked gross livers of a full plethoric habit and presenting bilious symptoms; in such, the occasional use of the ol. ricini, to remove the vitiated biliary secretions, was certainly attended with good effects. In reference to the exhibition of mercury, I am aware much prejudice exists, and it is quite certain that many who condemn its employment may have had to deal with colitis under some aspect unfavorable to its use; but in all sincerity I can say, having tested it in those extensive visitations of the disease, and being to thoroughly convinced of its beneficial effects, that to be compelled to encounter a similar epidemic without it would be so feel shorn of half my strength. It does not appear to me that opium exerts, in the management of dysentery, any direct curative effects, but acts much in the same way as the splint in a fractured limb, by keeping the parts at perfect rest while nature performs the cure. This is a very important indication, and hence the utility of combining it with calomel.

The meteorological conditions which seem favorable to the production of colitis, are dull, cloudy weather, accompanied by frequent storms, and an elevated temperature; and of those which favor its declension, none appear more decided than the occurrence of a brisk frost.

In conclusion, it will be perceived, that so far as my observations extended, lime-stone districts have enjoyed a singular security, and to the fact of the inhabitants using water impregnated with lime, has this immunity been ascribed.

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*Laryngotomy successfully performed in a case of Foreign Body in the Larynx.* By G. R. Morehouse, M. D., Philadelphia.

To the Editors of the Medical Examiner.

*Gentlemen,*—I send you the history of the case of "Foreign Body in the Larynx," upon which I recently operated.

The little patient, a girl of ten years, daughter of Mrs. Saunders, on Wednesday morning, February 26th, while laughing and romping with her school-fellows, drew into the larynx a piece of almond-shell, which she had been holding in her mouth. She was immediately seized with a prolonged paroxysm of coughing, followed by dyspnœa and loss of voice. As soon as aid could be obtained, she was carried home, and Drs. Scoffin and Gegan successively sent for. Under their hands every medical means for disengaging the shell was tried; the œsophagus also was explored, and instruments used to force any thing contained therein into the stomach; but every effort seemed in vain. The dyspnœa increased and the paroxysms of cough became more incessant and more fatiguing. The only remaining mode of relief was the removal of the foreign body, through an opening in the windpipe. Accordingly, on Thursday afternoon, I was called to see the child and operate, if advisable. At that time the condition of the little sufferer proclaimed the necessity for immediate aid. The face was turgid and of a purplish hue, the eyes protruding, and slightly divergent, the mouth circled with a white zone, and the nostrils distended and pale, forming a countenance expressive of mingled anxiety and despair, the head was inclined forward, and the muscles of forced inspiration strongly contracted, giving to the neck the appearance of great emaciation. Deglutition seemed unimpaired, and she was able, with apparent ease, to gratify her craving thirst. Respiration was with difficulty maintained, and was accompanied with a wheezing sound, similar to that heard in

asthma, although much more feeble. She complained of no pain, except when lateral pressure was made on the larynx. She seemed disinclined to exertion, except at intervals, when her motions were hurried and restless. She seemed fully to appreciate what was passing around her, and spoke to her friends in whispers, repeatedly expressing a wish to die.

Upon auscultation, the respiratory murmur, although barely discernible, was found alike free in either lung; there was no rattling sound to indicate the presence of a loose body in the trachea. Over the larynx, however, a whistling sound, as of a person blowing through a quill, was distinctly heard. These facts, therefore, the incessant cough, the dyspnœa, the pain on pressure, the whispering voice, and the whistling sound of constriction, all pointed to the ventricles of the larynx as the position occupied by the foreign body. By the time that these necessary examinations were made, and the mother's consent to the operation obtained, it had become too dark to operate without the aid of artificial light. The extreme condition of the patient, however, rendered it necessary that an opening, at least, should be made in the windpipe, to prevent death from apnœa. The operation of laryngo-tracheotomy, as originally suggested by Boyer, was selected as most appropriate. The patient was placed upon the table, and an attempt made to commence the operation. The violent convulsive struggles of the child, and the forced forward flexion of the head, rendered it impossible to proceed. Ether was therefore administered, sufficient to quiet, without producing its full anæsthetic effect. The superficial tissues were then divided in the middle line, by a cut nearly three inches in length, the isthmus of the thyroid body was separated from its attachment, and the plexus of thyroid veins pushed aside with the handle of the scalpel. The windpipe thus being laid bare, and the hæmorrhage slight, as soon as the effect of the ether had passed away, the knife was entered just below the crico-thyroidean artery, dividing, as it was withdrawn, the cricoid cartilage and three upper rings of the trachea. The air rushed from the wound as soon as the knife was removed, blowing before it the blood which flowed from the cut. The patient was raised and placed in a position favorable for the outward flow of the blood.

The relief experienced by the child was immediate and most gratifying, the black blood sunk from the face, the asthmatic breathing ceased, the laboring muscles were at rest, and the countenance, a moment since livid, swollen and inexpressive, was now lit up with a smile of gratitude. As soon as oozing had ceased, examination was made for the foreign body, and it was found effusion had taken place in the sub-mucous tissue, almost obliterating the cavity of the trachea at its upper portion. So great was the swelling that it was impossible to introduce an instrument through the rima glottidis, with the hope of extricating the shell; it was, therefore, proposed to continue the incision upward and divide the thyroid cartilage. On account of the prostrate condition of the child, however, and in hope that the œdema would subside and render the extension of the operation unnecessary, it was concluded to defer the division of the cartilage until the morning. In the mean time a conical curved tube, flattened laterally, was introduced through the opening, and secured by means of tapes passed round the neck. An anodyne was administered, and the patient left for the night.

On the following morning, the appearance of the child was propitious, she had rested well during the night, being troubled but little with cough; the tube had occasionally clogged with mucus, but was readily cleared with a feather. The œdema in the trachea had greatly subsided; the chords were, however, in apparently as close proximity as ever. It was decided, therefore, to open the thyroid cartilage, and for this purpose a probe-pointed bistoury was prepared in the following manner. A coating of wax was applied to the sides of the blade, thus converting it into an edgeless instrument, which having passed between the lips of the *rima*, would glide along without injuring them, to their junction with the thyroid cartilage. The bistoury thus prepared was entered at the previous opening, passed between the chords, and with it the cartilage divided. The crico-thyroidean artery was cut, but was readily sealed by the application of a point of caustic. The cartilage was pressed asunder and the piece of shell removed from the left ventricle, by means of a pair of polypus forceps. The tube was permitted to remain in the wound until the swelling of the glottis had subsided, which could

readily be judged of by the facility of breathing when the tube was closed. On the second day the tube was removed, and the wound closed with stitches and adhesive plaster. In order that the sides of the wound might be brought in apposition throughout their whole depth, a compress of a double headed roller was employed, the roller (half-an-inch in diameter) pressing parallel to the cut on either side, and bound to the neck by means of a bandage.

The cut has healed kindly and rapidly; the water dressing was used, and parts of the surface occasionally touched with nitrate of silver. The wound was entirely healed, on March 12th, fifteen days after the operation, the child's voice is as clear as ever in the morning, but towards evening is somewhat husky, especially if she is disobedient and talks much during the day.

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*Surgical Cases communicated to* D. GILBERT, M. D., Professor of Surgery in the Medical Department of Pennsylvania College, Philadelphia.

To the Editors of the Medical Examiner.

The cases herewith sent I believe to be sufficiently interesting to secure for them a place in your valuable monthly periodical. The first two cases are from my friend, NATHANIEL WATSON, M. D., of Lancaster county, Pennsylvania.

CASE. I. In the summer of 1825, I was called to Jos. Bougher, at Graysbills mill. I found him, about an hour and a half after the accident, lying upon a mattrass on the floor. As I entered the room, Mrs. G. said, "Doctor, Joseph is dead." I discovered a dislocation of the cervical vertebræ below the origin of the phrenic nerve. I placed a foot on each shoulder, grasped the head firmly and stretched the neck with a rotary motion. The vertebræ returned to their place; the head had been twisted to one side. He began to breathe visibly very soon after. After rubbing the extremities for some time, his pulse returned—continuing the frictions with spirits, he opened his eyes in about an hour after the dislocation was reduced, and attempted to sit up. He became frantic in another hour, with hard and rapid pulse, for which he was bled freely. He was kept in bed, in a dark room, aperients were given, with cooling acidulated drinks and low diet,

which was strictly enjoined for five days. On the eighth day he was able to walk through the room, free from all unpleasant symptoms and mind perfectly clear. In two weeks from the time of the accident he returned to work." He had sustained the injury by falling from a wagon loaded with hay, and was taken up for dead by the other hands.

Case II. "On the 14th of July, 1842, I visited a grandson of Esquire Missimores, who, 22 hours previously, had fallen from a cherry tree. The head was twisted to the left side, there was no feeling in the extremities, pulse feeble, respiration slow and stertorous, pupils dilated, extremities cold, &c. I pronounced it a case of dislocation of the vertebræ of the neck, and gave it as my opinion, that the boy would die if the luxation was not reduced; and, at the same time informed him, that he might die during the attempt, as well as subsequently to reduction. I reduced as in the case of Bougher. Frictions were made to the extremities, and spirits applied to them for one hour before he was was restored to consciousness, when he complained of pain in the neck and head. Respiration and pulse were gradually restored, and the extremities became warm. Ordered an enema, and requested that he should be kept quiet.

15th. Pain in back of head, pulse hard and quick, took ʒxij. of blood from the arm, applied cups to the temples, ordered purgative mixture, and then to apply a blister to the nape of the neck, and preserve quietness.

16th. Found him much better—continue quietude and spare diet.

18th. Continues to improve, and is apparently out of all danger.

22d. Discharged him."

These cases are exceedingly valuable in demonstrating that the vertebræ of the neck may be dislocated, and yet recovery follow. All the cases hitherto published, so far as my reading has extended, have had a fatal result. There are two cases reported in St. Bartholomew's Hospital reports, one of which died on the same day, the other in 32 hours after the accident. Another case is reported by Mr. Stanly, Royal Hospital, Harlan, died on 3d day. A case occurred in the New York Hospital, which terminated fatally on the 3d day; and the last case re-

corded may be found in the Boston Medical and Surgical Journal for August last, furnished by E. K. Sandborn, M. D., of Lowell, Massachusetts, death on the 8th day.

Case. III. Furnished by my friend J. G. Lightner, M. D., of Shirleysburg, Huntingdon county, Pennsylvania, presents points of interest, and therefore is also respectfully submitted for publication.

On the 15th of June, 1851, I was called to see a female child of Mr. B.'s, æt. four years, small of its age, and very thin in flesh. I found her with a slight fever and somewhat restless. On examination I discovered in the left lumbar region a tumor, which was moveable, and in size about that of an infant's head at birth. Immediately above the umbilicus there was a projection about two inches broad, and not more than three-fourths of an inch thick, as if some hard substance was pressing from within. Pressure made on it with the fingers did not produce pain or uneasiness. This was not moveable. I made up my mind that it was a tumor, but as to its nature I could not decide; and the part that projected above the umbilicus I thought might be some osseous substance, from its hardness. I gave the child a cathartic, which operated freely, and directed a febrifuge solution, and in a few days she was as well as usual. She never enjoyed good health after she was a year old, and her mother thought she felt a lump in her side long before she said anything about it. I did not see the child again until some time in October last, but occasionally heard that the lump was on the increase, that the hard projection had descended below the umbilicus, and finally was lost in the tumefaction of the abdomen in general. During this time her parents had given her various vermifuges, from the belief that it might be worms, and indeed some of the neighbors had persuaded them that it was a large tape worm.

Dr. Brewster and I went out some time in the above month to see the child, and we were not a little surprised to find its abdomen extended from above the scrobiculus cordis to the pubes, and laterally to fully the size of a woman's abdomen at her full period of gestation. The lower extremities were œdematous and very much swollen, and her upper extremities, together with her face, were very much emaciated. On percussion of the abdomen

I found no fluctuation; the abdomen had the same dull sound, in all its parts, indicating solidity. We concluded that the operation of paracentesis would not increase the danger, for the case was hopeless. I selected about midway between the umbilicus and pubes; after dividing the cutis, I inserted the trochar about two inches, and found considerable resistance; I withdrew the stilet, and nothing followed but blood, which amounted to about half an ounce; the child was somewhat relieved for a few days, but her abdomen continued to increase in size, if possible, so that the cutis seemed as if it would give way and let out the whole contents. She became more restless, œdema of the lower extremities and emaciation of the upper extremities increased, and on the 20th November at two o'clock, A. M., she died. I had previously obtained leave of the parents to make a post obit examination. Dr. Brewster being from home, I had no medical assistance. I made the examination of the case about 4 o'clock, P. M., (assisted by two women.) On opening the abdomen by an incision from the scrobiculus cordis to the pubes, the tumor made its appearance, which I found, by introducing my hand, had not formed any very extensive adhesions; I could easily separate them with my hand as I passed it around the tumor, but there was some difficulty in doing this for want of room. I discovered that its pedicle was about four inches in extent. I divided it with a scalpel from its attachment, and found it to be pretty solid, spherical in form, and composed of two lobes. I believe now that it was the corner or edge of one of these lobes that formed the solid projection above the umbilicus. Its weight is seventeen pounds and a quarter, and measures thirteen inches in diameter. It appears to be an adipose tumor, with a cavity of small extent filled with bloody serum, and a substance resembling soft cheese. The intestines were crowded to the right side, and had a natural appearance; the liver was forced upwards against the diaphragm; the kidney was rather higher than usual, and the aorta and ascending vena cava passed through under the tumor; these vessels appeared to suffer from pressure, and I believe that the tumor was nourished from a branch of the aorta, which was sent off a little distance above its bifurcation.

*An account of the operation of Tracheotomy for the relief of Croup—of Lithotomy under etherisation, and of Amputation of the Left Half of the Upper Jaw.* By HENRY H. SMITH, M. D., Surgeon to the St. Joseph's Hospital, Philadelphia.

The attention of the profession having been recently called, through the American Medical Association, to the importance of forming accurate surgical statistics, in order to obtain a correct estimate of the value of certain operations, the following cases are submitted as a contribution to the facts already published, on the subjects mentioned at the head of this article. As the object of the paper is to place these results in such a position as may render them available towards the formation of statistics hereafter, the account of each operation will be presented very briefly.

I. *Tracheotomy performed unsuccessfully for the relief of membanous croup.*—C——y, æt. 19 months, a large healthy boy, has had several slight attacks of false croup. His brothers, æt. 7 and 4 years, have also been subject to the same complaint, and his cousin, æt. 8, died recently of membranous croup. Nov. 23d, 1851, C—— was attacked with symptoms of croup resembling those of the other children, and of a former attack, and was therefore treated by the parents with lamp oil and other simple means. The next day, as he was no better, a physician was sent for, who deeming the case a mild one, directed the use of Coxe's hive syrup until relief was obtained. On the 24th and 25th the child appeared better, but on the 26th was again so much oppressed as to require medical aid, when the physician again directed the hive syrup, which vomited it freely. On the 29th, the child continuing to be much oppressed, the parents became dissatisfied, the physician was dismissed, and other advice sought.

In the afternoon of the same day, Nov. 29th, I saw it. The voice was now nearly inaudible, the cough sharp and barking, the respiration oppressed, and it had all the other well marked symptoms of croup. Suspecting from the history and symptoms, that the case would prove to be an insidious attack of membranous croup, I at once examined the fauces. The half arches and entire pharynx were of a dusky red color, the tonsils slightly swollen, with one or two spots of lymph upon their posterior surface, whilst a patch of the width of the little finger was adherent to the

middle line of the pharynx, extending downwards. I immediately directed a solution of the nitrate of silver, grs. xl. to the ounce of water, and swabbed the entire surface of the pharynx and top of the glottis, with a piece of sponge wet with this solution. The application of the sponge brought away a considerable amount of whitened mucus, the escape of which was facilitated by the vomiting induced from the administration of a teaspoonful of powdered alum, every 15 minutes, as advised by Dr. Charles D. Meigs of this city.* Thinking that the exhaustion and debility forbade the abstraction of blood, either locally or generally, the little patient was put under the free use of calomel; rubefacient and stimulating frictions were made on the throat: the temperature and moisture of the air of the chamber carefully watched, and directions given to repeat the emetic with the addition of a warm bath if required, in the interval of my visit. Seven hours subsequently the child seemed easier. For a day or two these symptoms alternated, and the treatment was so changed as to add to the former remedies the free use of mild expectorants, until Monday, Dec. 1st, when at 12 o'clock M., the child suddenly became worse, it having during these days taken xxiii. grs. of calomel, without any signs of salivation. The respiration was now very difficult, and accompanied by great distress and anxiety, the skin cold and damp, with other symptoms of impending suffocation. I at once advised the operation of tracheotomy, which was readily assented to by the parents.

At 2 o'clock P. M., assisted by my friend Dr. Ellerslie Wallace and several office pupils, I operated according to the plan recommended by Dr. Pancoast,† excising a portion of the 3d, 4th and 5th rings of the trachea, and keeping the opening dilated by means of a ring, formed of pewter, the hooks of which were inserted upon the edges of the wound. After the spasm consequent on opening the trachea had passed off, the mucous membrane was carefully examined, and presented a perfectly natural appearance, being free from all signs of false membrane, in consequence of which the prognosis was deemed favorable. The incisions required during the operation were followed by a copious hemorrhage, and required the application of several ligatures in order to arrest it.

* See Medical Examiner, Vol. I, p. 414, 1838.

† American Journal of Medical Sciences, Vol. 17, N. S., p. 307, 1849.

At 4 P. M., the child was asleep and breathing easy; and through the attention of Messrs. Rommel, Wellford and others of my private class, was now carefully watched, the mucus being wiped out of the wound as it collected, and every possible attention paid to its condition.

Dec. 2d, 9, A. M. The little patient was apparently doing well, and had nursed repeatedly, but the tracheal mucous membrane looked red and dry; patches of dry mucus or lymph were also seen upon the edges of the wound, whilst a thick ropy expectoration occasionally escaped through it in the efforts to cough. The dryness was relieved by the use of a camel's hair pencil, wet with glycerin and water.

At 10, P. M., the child was sleeping quietly, with a good prospect of recovery; at 2, A. M., its respiration became impeded by a collection in the trachea, which, owing to its viscidity, was wiped out with difficulty by the pencil, but after this it again went to sleep.

At 4, A. M., it had another attack of dyspnœa from a similar cause, and under this commenced to sink, and died at 6, P. M., just forty two hours after the operation.

The publication of a few successful cases having lately induced some who have read them to anticipate much success from the operation of Tracheotomy, even when not resorted to until the last moment, the account of the fatal cases becomes especially necessary, in order to guard against a false conclusion. Although this child had been suffering from the disease for eight days, there was no false membrane about the trachea at the point where it was opened, and both Dr Wallace and myself noticed the natural appearance of the lining membrane of the canal, and anticipated from this a favorable result. Yet with every care death ensued within 48 hours after the operation.

Having recently had occasion to examine the results as shown in the sum total of such cases as have been reported, it is made evident that the success of this operation is not encouraging; as out of 245 cases 188 have died, being more than three-fourths of the whole number operated on.

2. *Lithotomy performed while the patient was under the influence of an anæsthetic.*—Joseph ———, from Delaware, æt. 8

years, was brought to me by his parents on Jan. 5th, laboring under the symptoms of stone in the bladder. A pebble about the size of a grain of coffee, was also shown, as having been passed when he was but 18 months old. After a short interval of rest, I sounded him, but his cries and struggles rendered a positive diagnosis impossible. A few days were therefore allowed to elapse, during which the free use of the warm hip bath, together with alkalies and anodynes internally, afforded much relief. The child was, however, very pale, delicate and irritable, and having been freely indulged by his mother in every whim, very intractable, screaming most lustily as soon as I entered his room.

A consultation being called, I determined to etherize him before introducing the sound a second time; but owing to his struggles at the approach of any one except his mother, was compelled to have him held on the bed whilst the sponge was retained to his mouth. In a few minutes, however, he became perfectly relaxed and tranquil, during which he was carefully sounded, and a stone distinctly felt in the lower part of the bladder. When the effect of the anæsthetic passed off, the little patient had no recollection whatever of the event, nor did he subsequently show any constitutional disturbance from the introduction of the sound. A few days more being deemed requisite in order to allow the extreme irritability of the bladder to pass off, the constitutional treatment was continued, but no intimation given him of the proposed operation.

On Wednesday, Jan. 14th, after being induced to smell the sponge in his room, (which he now did very willingly,) he was thoroughly etherized, and whilst in that condition, was carried up stairs to the amphitheatre of the University of Pennsylvania, where he was again sounded, and the stone being distinctly felt, was placed in the position for lithotomy. I then immediately performed the lateral operation of lithotomy, opening the bladder by means of Physick's gorget, and extracting a stone weighing upwards of five drachms, when the patient being untied, was carried to his bed, and the effect of the anæsthetic allowed to pass off; he subsequently declaring that he knew of nothing being done to him until placed in bed, when the flow of urine over the wound excited his sensibility. During his convalescence no bad symptoms were apparent, except a hemorrhage on the fourth day after the

operation, consequent on his having accidentally pulled off a a ligature that had been placed upon one of the perineal arteries. In five weeks he returned to his native place, and has since, I am told, been entirely well.

The propriety of resorting to anæsthetics in operative surgery, is a question which fortunately for humanity is now doubted by few. As a general thing, I employ one part of chloroform to five parts of ether in nearly every instance, though in a case of lithotomy which I performed in the winter of 1851* upon an adult, and from whom I extracted a large and very rough stone weighing ʒij. grs. xvii., the use of an anæsthetic was deemed unadvisable, in consequence of the intemperate habits of the patient rendering it imprudent to give him the quantity necessary to etherize him.

3. *Amputation of the left half of the upper jaw.*—E. F——d, æt. 48, had been laboring under a malignant tumor of the antrum for about six months, which was increasing so rapidly as to render it necessary to submit the question of the propriety of removing it to a consultation. After carefully reviewing the peculiarities of the case, it was decided that though there was reason to suppose the disease could not be eradicated from his system, yet the patient's life might be prolonged for many months by the operation, as had been the case in the operation reported by Dr. Horner.† The precise nature of the disease, as well as the other doubtful circumstances being fully stated to the patient, he decided "to entrust himself to Providence and his surgeon," and to submit to the operation. Accordingly on the 25th of February, 1852, he was brought before the medical class of the University of Pennsylvania, seated in a chair with his head well supported, and the anæsthetic administered, it being decided to save him the pain of the external incisions, but not to operate upon the mouth until consciousness had partially returned, lest the blood, by escaping into the throat, might induce suffocation. The first incisor tooth being extracted, I cut through the cheek by a slightly curved incision which extended from near the middle of the left zygomatic arch to a point in the upper lip about three lines in advance of the angle of the

* See Medical Examiner, vol. 7, No. 4, p. 233.

† Medical Examiner, vol. vi. p. 16, 1850.

mouth. The upper flap being then dissected up as far as the edge of the orbit and the anterior orifice of the bony nose, the masseter muscle was separated from its attachments to the upper jaw, and the patient found to be free from the effects of the ether. A fine saw was then passed around and behind the body of the malar bone, and its attachment to the superior maxillary divided.

The anterior edge of the palate plate of the palate bone being then separated from its articulation with the palate process of the superior maxillary by cutting it with a strong knife, and the middle palate suture being also divided from behind towards the alveolar process of the bone, the latter was sawed through from the nostril to the mouth. The nasal process of the superior maxillary was next sawed across on a level with the edge of the orbit, and the lower part of the bone cut off from the margin of the orbitar plate, after which an elevator was passed behind the superior maxilla, and its attachment easily overcome. A few touches of the knife through some fleshy fibres then enabled me to remove the bone nearly entire, the remaining portion of the orbitar plate being excised subsequently from below. A branch of the internal maxillary bled most freely during the last part of the operation, and so did some other vessels in the flaps, especially the facial, but the hemorrhage was perfectly controlled by the ligature without resorting to the actual cautery. The wound in the mouth being tightly packed with lint, that in the cheek was accurately adjusted by points of the twisted and interrupted sutures, and healed throughout its greatest extent by the first intention. The patient, six days subsequently, was able to sit up in his chair, presenting but little evidence of the loss of so considerable a portion of the bones of his face, and two weeks afterwards returned to his home.

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*A Case of Poisoning from the external application of the Cocculus Indicus.* Reported by WILLIAM B. THOMPSON, Sen. House Surgeon, Emigrant's Hospital, Ward's Island.

Bridget Maddon—aged 6—native of Ireland—blue eyes and fair complexion, was admitted into the surgical division, accompanied by a sister and brother, on the evening of Feb. 3d, 1852. Disease—porrigo of the scalp, infected with vermin.

The nurse was directed, after cutting the hair close, to wash their heads with an infusion of Delphinia, (the house prescription.) Not having the article at the time, the apothecary sent an infusion of Cocculus Indicus, (used in the hospital for the same purpose,) made by displacement—a pound to three gallons of dilute alcohol—six ounces of which was used for the three children.

Half an hour after its application, I was sent for to see Bridget, whom I found laboring under tetanic spasms with the pupils contracted to their smallest diameter. As the spasm abated, the pupils became dilated to their fullest extent, and again contracting as the spasm returned. By touching the eyelids, the spasm could be produced at pleasure; this was repeated until all present became fully satisfied the difficulty was seated in the excito-motory system, and was the result of irritation rather than inflammation. The case was treated as one of idiopathic tetanus—with counter-irritation, warm baths and antispasmodics; but the attacks continued to increase in frequency and force, until the patient sank about midnight of the same day. A post-mortem examination was made of the body thirty hours after death. The viscera, brain, and its appendages, were minutely examined, and all found to be in a healthy condition. The nature of the case is confirmed by the younger sister, aged four, being attacked in the same manner and exhibiting the same symptoms as she (Bridget) did. Being in the Ward at the time, a warm bath was ordered, into which she was placed as soon as the first spasm was over; a mustard plaster was applied over the abdomen and to the legs and feet as high as the knee; injections of the tincture of assafetida were thrown into the rectum and a few drops administered by the mouth every hour. By persevering with these means the spasms subsided gradually after an elapse of three hours from the commencement of the attack. On the morning of the 4th inst. the patient's body and arms were again covered with an eruption resembling scarlatina, which gradually faded away during the day.

## *Remarks on Epithelial Tumors and Cancer of the Skin.* By J. Da Costa, M. D., of Philadelphia.

Anything thing that might elucidate, or be in any way connected with the histology of morbid growths, especially with that of cancer, has been of late of so much interest to us, that it is astonishing, so few have noticed the evident difference, existing between epithelial tumors, and cancerous affections of the skin. All writers on morbid anatomy, who have at all alluded to them, have classed them under one head—cancer—without paying the least regard to their different microscopical characters, or to the different results, following the same treatment employed. The fact, however, of most of these tumors not returning, led some surgeons to propose the term local or epithelial cancer; and induced one or two modern pathologists, a few years later, to investigate this disease. The first of these was Ecker, the next Mayor,* who, although correct in some respects, fell into the other extreme, endeavoring to prove, that although all these tumors were cancerous, on account of their tendency to return, yet they assumed entirely the epithelial element, and that this formed the cancer in every instance. In this opinion he was supported for some time by the most eminent living pathologist, Rokitansky, who, p. 385, Vol. 1st, of his Handbuch der allgemeinen pathologischen Anatomie, says: "Epidermic cancers are like medullary cancer, only having epithelial cells as their constituents." From careful microscopical observation, however, we find that most of these tumors are really epithelial, only an hypertrophy of epidermis or epithelium, whilst others, entirely overlooked by Mayor and Rokitansky, have another element, and are cancerous. Lebert in the best, and in many respects, the only complete paper† recently published, has made this the basis of his division, and following the nomenclature of Bennett, divides tumors of the skin into cancroid and cancerous. This was the great standard to establish, and one to which every observer must at last come. I shall, therefore, follow Lebert's division, and speak of tumors of the

* Thèse sur les tumeurs épidermiques et leurs relations avec l'affection cancéreuse. Paris, 1846.

† Du Cancer et du cancroïde de la Peau. Paris, 1851.

skin, as epithelial or epidermic, and as cancerous tumors; not adopting the word cancroid for epithelial, but calling those epithelial or epidermic, that have no cancerous element. As epidermis is, however, epithelium, we might designate the tumors on the skin, that more strictly ought to be called epidermic, epithelial; and those cancerous, which are really cancer; avoiding the use of the word epithelial cancer, which has led to so much confusion, and which ought never to be used. I have examined about 40 cases, occurring on the lip, face, body, gums, and tongue; as they all presented nearly the same elements, and their treatment could be reduced to the same principles, I shall give but a general description, although, did the limits of this paper allow, I should have preferred noticing individually each part of the body, where they occur.

*Epithelial Tumors proper*

Constitute the majority of all cutaneous tumors, and are mainly but an hypertrophy of healthy tissue. They occur on the face, there constituting the so called noli me tangere, on the lip, trunk, back of hand, foot, gums and tongue. Most frequently do we meet with them in the lower lip. Bock mentions a case of an epithelial tumor being found in the conjunctiva; I have examined one that sprung from the knee joint. Out of 25 cases I have noted down, there were

| | | | |
|---|---|---|---|
| Epithelial | tumor of | lip | 11 |
| " | " | face | 7 |
| " | " | trunk | 1 |
| " | " | extremities | 2 |
| " | " | penis | 1 |
| " | " | tongue | 2 |
| " | " | gums | 1 |
| | | Total, | 25 |

According to Lebert, these tumors, when they first appear, assume three forms; hypertrophy of the epidermis alone, hypertrophy of the papillæ, and hypertrophy with infiltration into the surrounding tissue. Belonging in some respects to the first variety, are a great many horny excrescences, some forms of corns, and other morbid growths, that result from continued pressure. The papillæ, when they become hypertrophied, form one of the

most singular constituents of epidermic tumors; they are found in many simple warts. The third form, which, extending to the muscles, can even infect the neighboring lymphatics, is usually the worst and last stage of development of epithelial formations. All these varieties are mixed in tumors we commonly meet with, for even those, which begin merely as hypertrophy of the epidermis, often terminate by infiltration into the surrounding tissue. These tumors, after they have been completely developed, exhibit a strange tendency to ulcerate; a tendency which is most marked in those on the lip and face, where they ulcerate, forming sometimes a smooth superficial, sometimes a reddish ulcer. The ulceration is in no case deep, but rather extends in length, begins from the surface, and not as in real cancer, from the deepest part of the tumor.

The general appearance of these tumors varies in different parts of the body; they all are elevated above the surrounding tissue, reddish on their surface, and very apt to inflame the neighboring parts. On the lip, they present either the appearance of a ripe mulberry, or a peculiar tuberculated form, and have a dark red crust on their exterior. On the face, they usually are about the size of a dime, and very red. In other parts of the body, they resemble in appearance very much the tumors of the lip; nearly all have on their surface, the same dark red crust.

Before describing their minute arrangement, we will examine the anatomy of the skin and mucous membrane, as far as they are important to our subject, and notice especially, the microscopical appearance of epithelial and epidermic cells. Epithelial cells are usually of three varieties; tesselated, cylindrical, and vibratile. Besides these, some of the French writers describe a form, between the tesselated and cylindrical, transitory epithelium, the "epithelium de transition." All these cells have several characteristics in common; it is only the shape of the cell-wall, that determines the variety to which they belong. They are all held together by an intercellular substance, which acetic acid dissolves. All of them, further, have nuclei, and contain granular matter, light in some cells, but very dark in others, and never larger than the 1-15000th part of an English inch. The nuclei vary in size in different parts of the body; to determine their relative size, in comparison, with those of the cells found in epithelial tumors, is a matter of interest, as will be shown here-

after. As the following measurements of Henle,* are acknowledged to be the only accurate ones, we have on this subject, I cannot do better than insert a condensed translation of his table.

| | | | | | |
|---|---|---|---|---|---|
| Nuclei of cells from the sole of the foot, | | | 0.0026 | of a Paris line† | in diam. |
| " | " | glans penis, | 0.0022 | " | " |
| " | " | tongue, 0.0020 | 0.0042 | " | " |
| " | " | deeper layer, 0.0011 | 0.0016 | " | " |
| " | " | mouth, 0.0030 | 0.0050 | " | " |
| " | " | peritoneum, | 0.0040 | " | " |
| " | " | mammary gland, | 0.0022 | " | " |
| " | " | vagina, | 0.0040 | " | " |
| " | " | nasal canal, | 0.0027 | " | " |
| " | " | trachea, | 0.0016 | " | " |
| " | " | choroid plexus, | 0.0025 | " | " |

The cells of tesselated epithelium are large, and have a pale nucleus, situated either in the middle, or at the inferior extremity of the cell. The large cells are pale, and not so granular as the small ones; they have elliptical nuclei, and sometimes nucleoli. (See fig. 1, *a.*) A variety of this tesselated epithelium, is that which lines arteries, lymphatics, veins and ducts; it is smaller and more oval. Some glands are lined by an epithelium, which is round and globular, and furnished with large nuclei. (*b.*)

Fig. 1.

*a.* Cells of tesselated epithelium, magnified 220 diameters.

*b.* Round epithelial cells lining glands.

*c.* Cylindrical epithelium from the trachea of a child; magnified 400 diameters.

*d.* Old epithelial cells.

*e.* Free nuclei.

* Anatomie Generale. Paris, 1843.

†One Paris line is the 4-45ths of an English line.

These cells are continually undergoing a change; the old ones die and are thrown to the surface. If we examine them in this stage, we find them dark, and with their edges curled up; some become perfectly fibrated, lose all characteristics of epithelial cells, and look like amorphous masses. (Fig. 1, *d.*) In these old cells, the nuclei are indistinct; while in the young ones, we have distinct granular nuclei. Cylindrical and vibratile epithelium (*c*) are similar; they have usually large nuclei. The transitory epithelium, is a variety between cylindrical and tesselated, sometimes seen in tumors of the lip. The cells have distinct nuclei, and frequently nucleoli. As regards the epidermis proper, it is tesselated epithelium. The cells, however, are in closer union, which is probably one of the reasons why tumors of the skin are denser in their structure, than those of the lip or gums.

It consists, according to Jahn, of

| | |
|---|---|
| Horny matter, | 93 or 95 parts. |
| Gelatinous matter, | 5 " |
| Fatty granules, | 6.5 " |
| Salts and acids, | 1.5 " |

Concentrated sulphuric acid dissolves it; so also do the caustic alkalies. Under the epidermis we find the derm proper, or in mucous membranes, the sub-mucous tissue. Standing out from it we have papillæ, which form so large a part of many epithelial tumors. They are formed like the derma of fibro-areolar tissue; into their base run vessels and nerves. We find also a great many glands in skin and mucous membrane, but they are of no importance to us here.

If we now look at the minute structure of epithelial tumors, we shall find their first and most important constituent to be epithelial cells, chiefly of the tesselated variety. (Fig. 2, *a.*) These cells are not larger than the usual pavement epithelial cells; their size, however, is very much influenced by the density of the tumor; they are found larger in epithelial tumors, that have a cauliflower arrangement. Sometimes the cells are so closely arranged as to resemble fibrous tissue (*d*); a few drops of acetic acid, however, will render them more distinct. Sometimes again, especially in tumors of the face, we have them completely covered with granules. The cells on the surface (*b*) are dark and non-nucleated; acetic acid does not change them. The nuclei of cells in epi-

thelial tumors are usually large and more distinct than those of common epithelial cells; many cells have double nuclei, (*a*) some nucleoli, but this is only dependent on most of these cells being more developed, and it will only be found to be so in tumors that have attained a large size. I measured accurately the nuclei of some cells from the internal surface of the lip, and some from the interior of an epithelial tumor of the lip; they were:

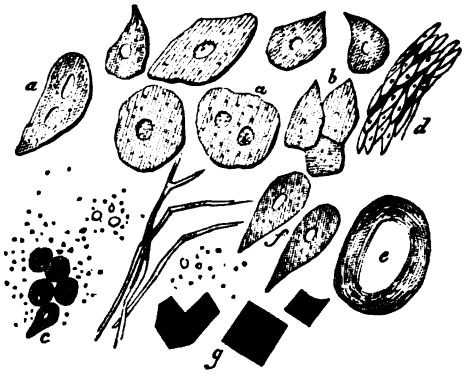
| HEALTHY LIP. | | TUMOR. | |
|---|---|---|---|
| Cell 1-800th of an inch, | nucleus 1-4000th | Cell 1-820th of an inch, | nucleus 1-3250th |
| Cell 1-1000th " " | " 1-4200th | Cell 1-1000th " " | " 1-3800th |
| Cell 1-2000th " " | " 1-5000th | Cell 1-1840th " " | " 1-4000th |
| Cell 1-1820th " " | " 1-4800th | Cell 1-2500th " " | " 1-4400th |

But in a great many small tumors, especially those of the face, there was no difference at all.

| EPIDERMIS FROM FACE. | | TUMOR. | |
|---|---|---|---|
| Cell 1-200th of an inch, | nucleus 1-4900th | Cell 1-1890th of an inch, | nucleus 1-4950th |
| Cell 1-3000th " " | " 1-5820th | Cell 1-2980th " " | " 1-5600th |
| Cell 1-1820th " " | " 1-4400th | Cell 1-1800th " " | " 1-4500th |

Mixed up in all these tumors with the cells we find a great many free nuclei, crystals of cholesterin, pigment cells, (*g*) and

Fig. 2.




*a.* Epithelial cells, with double nuclei, from a tumor of the lip; magnified 220 diameters.

*b.* Cells from the surface.

*c.* Globular cells.

*d.* Cells resembling fibrous tissue.

*e.* Fibrous cysts.

*f.* Fibroplastic cells.

*g.* Pigment cells.

blood globules. The second element we meet with, are masses of granules of all sizes. These granules, found also in cancerous tumors, have been supposed, by some of the German pathologists, to be nucleoli of larger cells. They are invariably present in epithelial tumors, especially in those of the face, where they very often constitute the largest portion of the tumor. Sometimes we find them enclosed in cysts; sometimes so united as to form the compound granular cell of Bennett. The peculiar tuberculated appearance seen in epithelial tumors of the lip, consists, microscopically almost entirely of granules.

The most interesting element we meet with, are small cells, (*c*) distinctly granulated; some of which, though comparately few, have nuclei. These cells, if acted on by acetic acid, become more distinct; their granular part darkens, and a cell wall can very easily be recognized. What they are, has not as yet been determined; they may be epidermic globules, or very young epithelial cells. Their size varies; they are, usually, about the 1-4000th of an inch in diameter. In tumors of the lip, I have seen them as large as the 1-3200th of an inch. Lebert,* perhaps, means these cells when he speaks of epidermic globes formed within a cell wall by concentric layers of epidermic cells, ("tassement concentriques des feuillets epidermiques;") if, however, he means the globes formed by cells in juxtaposition, they have never been noticed. They are usually round, and might be designated globular cells. I believe them to be, to a certain degree, characteristic of epithelial tumors, and do not recollect ever to have seen them in cancerous tumors; although they might be found in a cutaneous cancer, containing many epidermic cells. We also find fibrous tissue, entering into the composition of epithelial tumors, and forming cysts, which may be empty, or filled with granules, with epithelial cells, or with globular cells. Rokitansky and Bennett suppose these cysts to be formed, and condensed, by the pressure on epithelial cells, where they occur in great masses. These cysts are sometimes seen in tumors just forming. The cells are often held together by very delicate fibrous tissue, analogous to the intercellular substance, already noticed. Sometimes, especially in epithelial tumors of the eyelid, we find fibroplastic cells, and even fibroplastic mother cells;

*Op. cit.

a circumstance, which masks the characteristics of the tumor, and makes it, even under the microscope, a difficult matter to decide, whether it be cancerous or not.

The enlarged papillæ we meet with, are composed of closely arranged epithelial and globular cells, all so compressed as to give to these papillæ, under the microscope, a distinct outline; their real fibrous structure is thought to be preserved beneath.

If we act by chemical agents on the epithelial cells found in these tumors, they are affected in the same way as ordinary epithelial cells are. Acetic acid, whilst it does not affect the older cells, renders the young ones more distinct; especially their nucleus, which remains so until the cell wall gradually disappears. The nucleus is not affected by ammonia; but may be completely dissolved by caustic potassa. Heat and time do not change the character of the cell much. I have kept an epithelial tumor for ten or twelve days in summer without the cells being spoiled. In this respect they differ from cancer cells, which, probably, on account of their high degree of development, lose their distinctness in the space of twenty-four hours. Alcohol darkens the cell; but does not affect it otherwise. By boiling these tumors, we have a gelatinous substance left; by boiling them with liquor potassæ, we get a substance resembling mucus. Simon, who analyzed some scales from the face of a man, which, under the microscope, consisted of epidermic cells, found that on incineration, they left an ash containing carbonate and phosphate of lime and peroxide of iron; the latter was in such abundance, as to communicate a yellow color to the ash. He further states* that ash, yielded by the incineration of the ordinary thickened skin on the hands and feet, is perfectly white, but yet contains a trace of peroxide of iron.

The development of epithelial tumors is as follows: the first symptom the patient observes is a slight roughness, or sometimes a button-like excrescence. He irritates it by picking; it then assumes the shape of a wart, becomes more vascular, and grows lobular, especially in tumors of the lip. The increase is caused by layer after layer of cells forming; the old cells are driven to the top, and form the crust on the tumor. We can very often, in the first stage, see the epidermis separate from the

*P. 661. Simon's Chemistry of Man, translated by Day.

surrounding skin, and from this the papillæ springing. It is not usually accompanied with much pain; but generally with great itching, which is very annoying to the patient, not only physically, but mentally: sudden changes of weather aggravate this itching. Sometimes the tumor becomes so sensitive as to bleed when touched. After a short period it increases rapidly, its base hardens, the surface cracks, and a slow extending, superficial ulcer is established. The part immediately around the tumor hardens also, and often becomes highly inflamed, when the ulceration begins.

One of the most interesting points in connection with these tumors, is to ascertain whether, in any way, the economy is affected, as it is, generally, in cancerous tumors. The economy can only suffer from the extent of the tumor, its location, or the effect it produces upon the mind of the patient; but this affection cannot put an end to life, like real cancerous tumors, from direct morbid action, which produces the disease in another part of the body. Out of eighteen post-mortem examinations recorded by Lebert and Mayor, the disease could not in one single instance, be found in another part of the body. Of these examinations, seven were made on patients who had had epithelial tumors of the lip, two of the face, four of the arm, four of vulva, and one of back of hand. But although it cannot affect the system, we have the cells absorbed, and sent into the neighboring lymphatics. Lebert has seen this twice in the glands near the lip, and once in the arm. I have seen it occurring in a case of tumor of the lip; and it proves, that enlargement of the glands, is not entirely confined to cancerous tumors. It might be alleged, that glands are lined by epithelium, and hence, that these cells were but gland cells. But the cells lining glands are small, and cannot easily be mistaken for epithelial cells, occurring in tumors of the lip. We could also scarcely find globular cells in lymphatics. Sometimes the cells are infiltrated amongst muscular fibre, even amongst bone; but this is very rare. If infiltration into the surrounding muscles has taken place, the tumor is very apt to return, unless the part has been entirely removed.

The duration of epithelial tumors is very different. Those of the lip do not last so long as those in other parts of the body,

and ulcerate quicker, owing, perhaps, to the peculiar anatomical tissue of the lip. The patient very seldom consents to have them removed before their last stage. Out of twenty-one cases that I noted the duration of, up to the time of operation, there were:

| | 3–6 *months* | 1 *year* | 2 *years* | 3 *years* | 4 *years* | 7–9 *years* | 22 *years* |
|---|---|---|---|---|---|---|---|
| Lip, | 1 | 1 | 4 | 2 | 1 | 1 | — |
| Face, | 3 | 1 | 1 | — | 1 | — | — |
| Gums, | — | — | — | — | — | 1 | — |
| Tongue, | — | — | — | 1 | — | — | 1 |
| Trunk, | — | — | — | — | — | 2 | — |
| Extremities, | | — | 1 | — | — | — | — |

From this table it appears that they usually grow slowly; differing, in this respect, from real cancer, which in the skin, grows very rapidly. Very often the first wart remains stationary for a long time; one case that came under my notice, had a wart for nine years before the tumor spread. According to some, the wart in tumors of the face may remain stationary for thirty-one years. These tumors occur oftener in the male than in the female, especially those of the lower lip. Tumors of the face, however, are more frequently met with in females. I have noted:

| | *Men.* | *Women.* | *Total.* |
|---|---|---|---|
| Epithelial tumor of the lip, | 11 | — | 11 |
| " " " face, | 3 | 5 | 8 |
| " " " tongue, | 2 | — | 2 |
| " " " gums, | — | 2 | 2 |
| " " " penis, | 1 | — | 1 |
| " " " trunk & extremities, | 2 | 1 | 3 |
| | 19 | 8 | 27 |

In regard to age, it is found to be chiefly a disease of the old.

*Table of* 24 *Cases.*

| *Age.* | *Lip.* | *Face.* | *Tongue.* | *Trunk.* | *Extremities.* | *Penis.* |
|---|---|---|---|---|---|---|
| 19—23 | 1 | 3 | — | — | 1 | — |
| 23—30 | — | 2 | — | — | — | — |
| 30—40 | — | 1 | — | — | — | — |
| 40—45 | 4 | — | 1 | — | 1 | — |
| 45—50 | — | — | — | — | — | 1 |
| 50—55 | 3 | — | — | — | — | — |
| 60—65 | 1 | — | 1 | — | — | — |
| 73—80 | 2 | 1 | — | 1 | — | — |
| | 11 | 7 | 2 | 1 | 2 | 1 |

It is worthy of remark, that epithelial tumors seldom, if ever, are found to occur amongst negroes.

The general cause of these tumors is local irritation. Many of them result from friction, which destroys the epidermis, and causes it, in consequence, to be secreted in greater quantity. Those on the face are often caused by constant scratching; those on the lip, by the irritation of smoking short pipes, or by intense heat applied to the part. One case I saw, in a shoemaker, occurring on the abdomen, could be clearly attributed to the pressure from a small board, worn whilst working. The epithelial tumors of the scrotum, (chimney-sweep's cancer) are caused by the irritation of the soot; that they, however, may be caused by any irritant, is shown from the fact, that workmen, exposed to the fumes of arsenic, are liable to the same disease. A great many of these tumors are caused by the injudicious use of caustics. Ricord mentions, that phymosis is a predisposing cause to epithelial tumors of the penis.

As regards the diagnosis of epithelial tumors, although it may be difficult in some instances, yet, in a majority of cases, we are able to make it out, by looking at the history of the case, the general appearance of the tumor, its duration, and its manner of growth. Many of these tumors may also be diagnosticated by the microscope, by cutting off small portions, where this can be done without inconvenience, as in some tumors of the lip and penis. If ulceration has begun, a drop of the fluid on the surface, when examined, will often indicate the nature of the tumor.

The prognosis is highly interesting. From the description given, it might appear, that these tumors were entirely benign, and not in the slightest degree liable to return. But it is not so; they will sometimes return, those on the lower lip especially, if the elements have been infiltrated into the surrounding tissue. Yet the prognosis is by far more favorable, than in cancer of the skin. Their development is so much slower, that it leaves time for active measures to be adopted, and almost all cases, if treated promptly, can be cured. The disease taken out once, may return; but if taken out a second time, will probably not. Out of all the cases I have been able to follow, not one has as yet returned. The return, when it takes place, is entirely local, and must not

be sought for in the system of the patient. The best prognosis, according to Lebert, give the epithelial tumors of the body, next those of the lips and penis, and lastly, those of the vulva, which, according to two cases, published by M. Hugier, by producing chronic inflammation of the intestines, caused death.

In the treatment of epithelial tumors, we have but one object in view,—to destroy the part. This can be done sometimes by caustics, or better still, by the knife. Caustics, if at all used, should be very active; they ought, however, never to be employed, except in cases where the part is not accessible to the knife, or where the patient is unwilling to submit to an operation. In such cases, especially in tumors of the face, the internal use of arsenic has been attended with a great deal of success. If excision be performed, we must operate in healthy tissue, and remove every thing at all connected with the diseased spot. The wound usually heals well, and by first intention. It is well in tumors of the lip, to let the patient use glycerin for some time after the operation, to prevent irritation, and to keep the part moist.

A very singular, but unsuccessful mode* of treating tumors of the lip, has recently been tried by Jobert; he tied the artery, vein, and nerve, leading to the part affected, but soon found that it diminished the tumor, without curing it. If the part removed be very extensive, we have to perform a plastic operation, to fill up the gap. In some cases in the extremities, where the patient is rapidly sinking from hectic fever, or loss of blood, amputation is the only resource. To be enabled the better to trace the difference existing between epithelial tumors and cancer of the skin, we will briefly consider the nature of the latter.

*Cancer of the Skin.*

As before stated, not more than 1-6th of the tumors of the skin called cutaneous cancerous tumors, are really cancers. Out of 40 cutaneous tumors, I have only seen 9 cancers; a proportion even larger than usually met with. They were:

| | | |
|---|---|---|
| Cancer of the lip, | - - - - - - - - | 4 cases. |
| " " face, | - - - - - - - - | 2 " |
| " " penis, | - - - - - - - - | 1 " |
| " " gums, | - - - - - - - - | 2 " |
| | Total, | 9 |

*Noticed in Albers's Jahresbericht for 1850.

The skin on the lip and organs of generation is most frequently attacked. According to all modern writers, we find in the skin all the different varieties of cancer. Bock says, he has most frequently met with scirrhus; whilst the usual opinion is, that it is a mixture of encephaloid and scirrhus. Melanotic cancer is very rare. Bennètt in his book on Morbid Growths, observation XL., page 91, reports a case of melanotic cancer affecting the skin. The general appearance of cancerous tumors of the skin, is not very marked, from that of epithelial or epidermic tumors. They, however, rarely attain the size of these; never assume the cauliflower arrangement; ulcerate sooner, with a great deal of pain; and develope their peculiar action, at the same time, or shortly afterwards, in a different part of the body. Velpeau mentions a case, where in an autopsy made on a man who died after an operation for the removal of a cancer of the lip, a cancer was found to exist in the liver. Often in cancers of the lip, we have the sub-maxillary gland becoming cancerous.

As regards the microscopical elements of cancerous tumors of the skin, we find cancer cells, free nuclei, fibrous tissue, epithelial-cells and granules. The cancer-cells are of ordinary size; some have double nuclei, some nucleoli. The nuclei themselves are very large and distinct, measuring about the 1-5000th part of an inch. In several instances I found mother-cells. The crust on the surface of the tumor is composed of cancer-cells and epithelial cells, mixed up with blood globules; sometimes the cancer-cells are so mixed with the epithelial-cells, that these latter appear, as if their nuclei were cancer-cells. The fibres in the middle of the tumor, uniting the cells, are usually very strong and dense, much stronger than the fibres in epithelial tumors. The cysts they form are very much of the same kind as those met with in scirrhus of the breast; they are sometimes empty, sometimes filled with cancerous matter. Cancerous tumors of the skin, like epithelial, begin as a small wart, but are usually harder, and of faster growth. They also ulcerate sooner, causing the neighboring lymphatics to swell. Sometimes there are several small separated tumors, each of which is distinctly prominent, and which give to the whole diseased mass, a peculiar lobulated appearance. The ulceration, if it once begin, goes on very rapidly; the ulcer, however, begins from the derma proper, and

not, as in epithelial tumors, from the surface; it is also much deeper. According to most observers, cancer of the nose and penis have the most superficial ulceration. If the disease be cut out, it will very often return speedily, sometimes within the lapse of a few months; and the patient either sinks from the return of the cancer in the same spot, or from its affecting some other organ. Lebert gives a very accurate table of 12 cases, in which he was able to trace the period between the first operation and the return of the tumor:

| | | | |
|---|---|---|---|
| 3 | Cases lasted from | - - - - - | 3 to 6 months. |
| 3 | " | " - - - - - | 6 to 9 " |
| 3 | " | " - - - - - | 9 to 12 " |
| 1 | " | " - - - - - | 12 to 15 " |
| 1 | " | " - - - - - | 15 to 18 " |
| 1 | " | " - - - - - | 18 to 24 " |
| 12 | | | |

The average duration of the disease before it terminates fatally, is about two years. In two cases I was able to follow, one died after eleven, the other after fifteen months. Broca mentions a case, which, although operated on five times, terminated fatally in six months. In regard to sex, it seems, that on the whole, men are more liable to be attacked than women. Out of the cases I have noted, there were seven men and two women. The age most liable is the same as in epithelial tumors; it is chiefly from 45 to 75 years. From this it will appear, that the prognosis is the same as that of cancer generally. The treatment usually preferred is to operate, with the hope of the disease not returning speedily, rather than to let the patient have the horrible suffering, of an open ulcerating cancer. If the glands be much involved, it seems to be the best practice not to operate. The patient must be supported by tonics, and by proper exercise and diet.

The great difference then existing, as we have seen, between epithelial or epidermic, and cancerous tumorsof the skin, is:

| | |
|---|---|
| That one is a local disease. | The other constitutional. |
| One grows slowly. | Grows rapidly. |
| Ulcerates superficially. | Ulcerates deeply. |

| | |
|---|---|
| May return; but only as a local affection. | Always returns; sometimes in another spot. |
| Accompanied with little pain. | Always attended with a great deal of pain, |
| Microscopically shows healthy tissue. | Microscopically shows cancer-cells. |
| Prognosis usually favorable. | Prognosis very grave. |
| Local treatment cures it. | Local treatment only palliates it. |

[To be followed by a report of Cases.]

## PHILADELPHIA COUNTY MEDICAL SOCIETY.

*Extra Meeting, March 9th, 1852.*

### DISCUSSION ON ANÆSTHESIA.

(Reported for the Medical Examiner.)

Dr. Condie, in opening the discussion, said: It would have been better, perhaps, had some one who is an advocate for the employment of Anæsthetics under all the circumstances in which they have been recommended, to have opened the discussion this evening, but as I have been requested to commence, I feel no hesitation in announcing myself as one entirely opposed to their employment when this is done for no other object than merely to prevent or assuage pain.

Pain I admit to be an evil, often of very considerable magnitude, to relieve which is unquestionably the duty of the physician, in every instance in which it can be done without endangering the patient's life, or incurring the risk of augmenting the violence and duration of any disease under which the patient may at the time labor. But to prevent or soothe pain is not certainly the leading object of the physician's office—on the contrary, his chief aim should be to protect the organism from every lesion by which its functions may be impaired, or its life destroyed. To do this he is often warranted in inflicting pain, but he has no right to jeopard the integrity or life of the organism, merely for the sake of relieving or preventing temporary suffering. The propriety of the employment of anæsthetics for no other object than to produce insensibility to pain, must be based upon their entire and invariable safety. The advocates of these agents maintain that when they are used with proper precaution, and their effects are care-

fully watched, they are perfectly safe. The rules, however, for their safe employment have never been given with any degree of clearness and precision.

Whether all the cases have been made public, in which the induction of insensibility by means of the recently introduced anæsthetic agents has been productive of injurious or fatal results; cannot be ascertained, but a sufficient number are upon record to prove that these agents are not as invariably safe, as was at first supposed. It is now admitted by some of the advocates for their employment, that we cannot always predict the effects that may result from their administration—that we are not, as yet, able to determine, before hand, the existence of those constitutions or peculiar states of the system in which the production of anæsthesia is liable to prove injurious. Now upon this are based my objections to the use of anæsthetics, when given merely to induce insensibility to pain. In surgical operations, and during parturition, it is not maintained, by any one, so far as I am aware, that the induction of anæsthesia increases in either case the safety of the patient—it is admitted, I believe on all hands, that the only benefit that results is simply relief from pain. This is unquestionably, in most instances, a boon not to be refused to our patient when it can be safely granted; but I cannot admit the right of the surgeon or obstetrician to resort to an anæsthetic to prevent the pain of an operation, or that of parturition, in any instance, until he shall be able to say, positively, that no injury will be liable to result from its employment. I can conceive of cases where it would be injudicious to cause insensibility to pain, even though it might be done without the slightest risk—cases where the sufferings of the patient afford important indications to the surgeon or accoucheur, upon the absence of which indications he is led into errors that may eventuate in much suffering, or even the loss of life.

It has been asked whether, if we could be put in possession of the statistics of the deaths from opium, the destruction of life resulting from its use would not far exceed that which has been caused by any of the modern anæsthetic agents, and whether with this fact staring him in the face, the practitioner would be warranted in abstaining from its use as a remedial agent in the cases which call for its administration. It cannot he denied that

much mischief—a great destruction of life, even, has been occasioned by the *careless* and *improper* employment of opium, in common with every other active article upon the lists of the materia medica, and I for one, certainly do not admit that, on this account, its use as a therapeutic agent is to be denounced. But is any practitioner prepared to defend the administration of opium for the production of anæsthesia in surgical operations and during parturition? If so, then I admit that the argument in favor of the use of anæsthetics in surgery and obstetrics, drawn from the occasional injurious effects of opium, has some force; but not otherwise.

For the purpose of arresting disease, of guarding the organs of his patient from dangerous lesions, and thus saving him from death, from protracted suffering, or from decrepitude, it is the duty of the physician to make use of every therapeutic means which experience has shown to be generally beneficial in similar cases—nay, where the disease is violent and the danger of a fatal result imminent, he is warranted in the resort to remedies, which, from their well-known properties, would appear to be adapted to fulfil promptly the well marked indications in the case under treatment, even though we are aware that the use of those remedies is attended with danger—that in place of a curative, they may possibly produce a destructive influence. But in cases that he has every reason to believe will terminate favorably without the administration of any doubtful or dangerous remedy, is there any propriety in the practitioner resorting to one of this character, merely to relieve some prominent and distressing symptom? I should certainly say there is not. I know not what others would feel, if by a remedy given merely to cause insensibility to pain, in any case of which pain is known not to enhance the danger, the death of the patient were to be produced; but I trust that, with me, every conscientious physician would acknowledge that the plea of a humane intention to save his patient from suffering, is not a sufficient excuse for the fatal effects of his indiscretion.

As therapeutic means, the modern anæsthetic agents, even when administered by inhalation, may prove advantageous, I have no doubt, in many violent and dangerous diseases. Their topical application to external parts, when these are the seat of severe

neuralgic pains, has been shown, in a large number of instances, to give prompt and effectual relief.

Some of the advocates for the use of anæsthetics in surgery and obstetrics, admit that danger may result from the inhalation of chloroform, but insist that such is not the case when pure sulphuric ether is inhaled—in no instance, they assert, has the slightest injury resulted, when this latter has been employed for the production of insensibility to pain. This sweeping assertion is, I confess, a startling one, when we reflect upon the immense number of cases in which the sulphuric ether is reported to have been employed, and the careless manner in which it must at first have been administered, and then consider the powerful impression it exerts upon the brain and nervous system when inhaled, as it has so often been, to a sufficient extent to induce complete anæsthesia. I admit, at the same time, that, if there has been no keeping back of the fatal cases—there is scarcely any thing upon record to disprove the innocuous character that has been ascribed to sulphuric ether as an anæsthetic.

It has been recently reported, but I will not vouch for the accuracy of the statement, that although the production of insensibility by the inhalation of anæsthetic agents may not produce immediately any injurious results, that the impression made by these agents upon the brain has subsequently resulted in a derangement or impairment of the intellectual faculties. I can easily conceive that this might result from their frequent use, at short intervals, but have my doubts as to its having ever occurred from a single employment of them, excepting, perhaps, it may have been in a case, where the brain was already strongly predisposed to disease or functional disturbance, and then, we should presume that the result would be immediate or nearly so.

Dr. Turnbull, though opposed to the indiscriminate use of anæsthetic medicines, expressed himself as greatly in favor of sulphuric ether. He considers it the safest and most reliable of this class of agents, and stated that he had been able to find but one case recorded of death caused by its use. This is narrated in the number of Ranking's Abstract, for June 1848, p. 191, and is as follows:—

"On the 10th of July, a man æt. 55, of robust constitution, was etherised for the removal of a tumor; after inhaling two or three

minutes, considerable agitation was observed in the face and limbs; during five minutes more the inhalation was continued, and complete insensibility induced. The first incision was performed, when the dark color of the patient's countenance attracted the operator's attention, and the man almost immediately expired. On dissection, the viscera exhaled a powerful odor of ether, the blood was viscid, and the lungs were deeply congested." —*Journ. des Connais. Med.-Chirurg.*

Three other cases are recorded; an investigation of which, however, will show that death was erroneously attributed to the ether employed.

The number of deaths from chloroform, amounted to 18; a difference very disparaging to the latter.

The mischief, in most of the fatal cases recorded, he was firmly convinced, resulted not so much from the article per se, as the abuse, or incautious use of it.

Now ether and chloroform are generally administered by means of a handkerchief, and consequently, as the medicine is impermeable to the atmosphere, there is not a due admixture of oxygen with the ethereal vapor; hence, the oxygenation of the blood is impeded and dangerous, and occasionally, as we have seen, fatal results ensue.

In administering ether, we endeavor to bring the system rapidly under its influence, by applying to the mouth of the patient a sponge well charged with the anæsthetic. In the use of chloroform, more caution is required; fifteen drops should be exhibited and repeated every minute or two, until the desired effect is obtained.

Dr. T. regarded the use of anæsthetic agents as invaluable in many diseases, in which pain is a prominent and distressing symptom; as in colic, asthma, neuralgia, &c.

Dr. Parrish remarked, that in the absence of so many of the advocates of anæsthetic agents, he felt called upon to say something in their favor, in reply to the remarks of the former speaker.

It so happened, said Dr. P., that on the first announcement of the discovery of the power of ether to destroy pain, I was one of those who received the intelligence with gladness. It came to us in the autumn of 1846, on the authority of Drs. Warren

and Hayward, two of the oldest and most eminent Surgeons of New England, attested by their colleagues, at the Massachusetts General Hospital, and by other reliable witnesses of its effects. The evidence was too strong to be resisted, and I distinctly remember the effect which the reading of Dr. Bigelow's first paper on the subject produced on my mind. It sent a thrill of delight and gratitude through my frame as I read that an agent had really been discovered, which had the power of promptly and effectually destroying the sense of pain, even under the most severe inflictions of the knife.

For, whatever may be said here of theuses of pain, and however lightly we may esteem its dangers, it is still a dreaded evil. Before it the stoutest heart quails, the strongest man becomes helpless as a child, and the bravest man reveals that he is as weak and frail as the rest of mortals. Under its severe attacks all alike succumb and cry out for relief. But, besides the mere interruption to ease and comfort induced by pain, it is often a positive evil, and may even prove a cause of death.

It aggravates disease by disturbing the balance of the nervous system, and preventing that repose so necessary to the recuperative process, while, if it be intense and long continued, it may exhaust the nervous power, and extinguish life itself.

Whatever tends, therefore, to annul pain is not a mere luxury, but a positive remedial agent of great power and utility. Hence, I cannot but regard the discovery of ether as a great boon conferred upon mankind, and although not naturally as ardent and sanguine in my temperament as some of my friends, I was not yet cold enough to receive the tidings of its introduction with calmness or indifference.

I confess, however, that a shade came over the brightness of the first view, when I reflected that an agent possessing such remarkable powers, might, on more extensive trials, prove so eminently dangerous to life as to preclude its employment. I fancied some poor patient stretched on the operating table about to be subjected to a safe and simple operation, suddenly overpowered by its use beyond the point of recovery; and the image of a scene so frightful rose up before me as a thick cloud on the sky of hope.

I became from the first an anxious, and I trust, an unpreju-

diced inquirer into the merits of this discovery; and holding, at that time, the position of Reporter on the improvements in Surgery, for the College of Physicians, I made the subject of anæsthetic agents a special topic of investigation. After the lapse of a year, the evidence, pro and con, was carefully sifted—the medical journals of this country and of Europe were critically examined, and notwithstanding many of these had at first taken strong ground against ether, and were by no means backward in publishing anything which was deemed unfavorable to it, an overwhelming mass of testimony to its utility and safety was collected. I found that, although the article had been used in thousands of cases, from the simple operation of extracting a tooth, to the most extensive and dangerous operations in Surgery; although its employment had been almost indiscriminate, and in many instances it had been recklessly given by non-professional persons—that but eight or ten cases of death had been attributed even by its opponents to its use—and that not one of these occurred under its immediate effects, the event generally occurring days, and even weeks afterwards, and under circumstances which rendered it very questionable whether the ether had any agency in the result. Since that time, which was in the year 1847, I have been an attentive observer of the progress of this matter. I have examined carefully for fatal results, and have not yet found a case reported in which death could be fairly and unequivocally attributed to the action of ether.

The case mentioned by Dr. Turnbull this evening, may be one of that character, and similar ones may have been reported, but if so, they have escaped my observation.

As it relates to chloroform, their can be no doubt that eighteen deaths have occurred after the use of this article in surgical operations, and some of them under circumstances where all needful caution was observed in its administration. These may have been owing to some idiosyncrasy in the individuals submitted to its action, or to a peculiar mental or nervous condition existing at the time. Fright from the apprehension of an impending operation, or faintness from mental inquietude, while the patient was sitting upright, in connection with the strong and sudden sedative influence of the chloroform, may have extinguished the vital spark in some of these cases. But whatever the cause, they

stand against the reputation of chloroform as a safe article, although they are not, I think sufficient, indiscriminately to condemn it.

It is worthy of remark, that all the fatal cases from chloroform have occurred in surgical practice; and so far as I have examimed into them they have generally been before the infliction of pain. When given in cases of labor, where the pains are violent, and for the purpose of counteracting them, it seems to be more safe; and I am not aware of any deaths being reported by obstetric physicians, although it has been extensively employed in their department.

The objection made here to anæsthetics, on the ground of the dangers to be apprehended from their *injudicious* employment, will lie against all the most potent and useful articles of the Materia Medica. Shall morphia be condemned because by the mistake of a physician or apothecary, a solution of a drachm to an ounce of water in a teaspoonful dose will kill, in a case where a grain to the ounce was intended? Shall laudanum be set aside, because it is taken in large doses for the purpose of self-destruction? Shall wine and brandy be stricken from our list of remedies, because thousands are annually swept into their graves from their habitual use? The holding up of this argument by the opponents of anæsthetic agents, shows the shifts to which they must resort to support their position, for they are possessed of too much intelligence and good sense to use it under any other circumstances. Considering the great power of these agents, and the rapidity with which they act, it is indeed remarkable that so few fatal cases have occurred. Let it be remembered that ether has now been in use for over five years, and chloroform for over four years, and that they have been extensively employed in all parts of the civilized world; that every large Hospital in Europe and America, except our own Pennsylvania Hospital in Philadelphia, uses one or the other of them habitually before great operations; that private practitioners employ them daily in surgical and obstetric practice, and yet with all this vast experience of their use, their most determined opponents can with difficulty make out a single case of death directly traceable to ether, and but eighteen attributable in any way to chloroform; and I say that no article in the Materia Medica is established

upon a firmer basis. It is in vain to interpose theoretical objections, or imagined fears, against such an array of facts; and because a man may have once committed himself by a hasty opinion, it is useless to continue the opposition against such evidence.

As it relates to my personal experience of the use of anæsthetics, I may remark, that as to chloroform I have rarely used it, regarding ether as equally effectual and much more safe; and while that is attainable it is unnecessary to resort to the other.

If ether was not at hand, and the case was urgent, I should not hesitate however to employ chloroform, with that caution which the power of the article renders it necessary to observe. I have many times administered ether, and although for several years past my attention has been mainly devoted to general practice, almost to the exclusion of obstetrics, and of large operations in surgery, yet I have often been associated with others in the management of important surgical cases, and have had frequent opportunities of observing the effect of ether in preventing the pain of operations. Quite recently, Dr. Pancoast and myself were consulted by a lady from New Jersey with a large tumor on the side of the neck, involving a lobe of the parotid gland, which we deemed it proper to extirpate. The operation was skilfully performed by Dr. Pancoast while the patient was under the influence of ether. In this case the article acted most happily. The patient sat upright in a chair during the operation, with her head leaning on my shoulder; she was sufficiently conscious to reply to questions, while the feeling of pain was completely annulled. After the Dr. had dissected off the skin from the tumor and was dragging it from its bed, in order more completely to detach it from the surrounding parts, the patient apparently lying in a tranquil slumber, I inquired of her how she felt? when she replied in the tone of a person overcome with drowsiness, "very comfortable!" After the completion of the operation, she stated that the last thing she remembered was the sensation of the knife cutting through the skin, as though a line were being drawn over it by a dull instrument; and when the tumor was shown to her, she could scarcely believe that it had been removed. There was in this case no moaning, or stertorous breathing, or restlessness while under the influence of the ether, and she came out of it cheerful and self-possessed. Union by the first intention took place in the wound, and she had a rapid convalescence.

I have been concerned with Dr. Pancoast still more recently, in two cases of cancerous mammæ, in which, after presenting to the patients and their friends the doubts hanging over the result of an operation, they have decided to submit to it, if they could take ether.

In both cases the glands of the axilla were involved, and it was necessary to prolong the incision into the axilla, and to pick out the glands with the fingers. This was done without the patients being conscious of it, although in both of them there was some degree of restlessness and apparent distress during the operation. One lady experienced under the ether a pleasurable excitement, and awoke while the dressings were being applied, in an excellent humor, and with that tendency to loquacity which is often observed after the use of alcoholic stimuli. It would be easy to multiply cases of this description, but I will not detain the Society longer. I may say, however, that I have used ether to a considerable extent as a therapeutic agent, in nervous diseases, and in some cases where there was an intolerance of the preparations of opium, and yet where it was very desirable to induce sleep. Such are cases of nervous or sick headache, of neuralgia, various spasmodic affections, &c. In these cases I have seen the inhalation of small quantities of ether given at short intervals, and not carried far enough to induce complete insensibility, produce the most happy effects. About a tablespoonful poured upon a sponge, previously moistened with hot water, and taken in the hands of the patient, will often tranquillize the system, and favor repose, where anodynes fail, or produce but a partial effect; nor have I ever seen any unpleasant effect produced by this mode of administration. I am glad that my friend Dr. Condie does not carry his objections to the use of anæsthetics so far as to condemn them altogether in the treatment of disease, and that he is willing to admit that they may prove advantageous in many violent cases; though I cannot see how with these views he can be so decidedly against them in surgical operations and in the practice of obstetrics.

I know of no subject which can more properly claim the attention of the Society than this; and it is to be hoped that the members will express their views freely upon it.

We in Philadelphia are, I fear, regarded by our brethren in

other parts, as too indifferent to the value of this discovery, and from the fact of some of our leading men taking strong ground against it at the start, many may have been disposed to shut their eyes to the true position of the case, and have not given to it a free and unprejudiced inquiry.

I trust, however, that though slow and cautious in forming an opinion, the profession in Philadelphia will be found right on this question, and that no one will allow his preconceived views to stand in the way of its fair and candid examination.

Dr. Darrach, said: That upon all new medical topics, diversity of opinion may be very properly and necessarily expected to exist; some will entertain views in favor and others in opposition; nevertheless, in the midst and by means of it, the profession is quietly and slowly forming its axiom.

In respect to anæsthetic agents, as two views, strongly in contrast with each other, have been eloquently presented, it may not be without interest to give the subject a triangular form, by presenting a third view.

The agencies in question, more especially chloroform, are dangerous. Chloroform has destroyed life, and that in a most unexpected, sudden, and shocking manner, and had it been discovered in the more depraved ages of the world, it would doubtless have subserved tragical designs. And, although we now have no such fears, yet independently of the sad effects of presumptuous ignorance, there is still danger from its use; and that when under the ordinary watchfulness of the physician. In an obstetrical case, for example, chloroform was administered with ordinary prudence, or rather say, within the limits of *ordinary imprudence*, and the patient became quickly insensible, unconcious, pulseless and cool, and all this continued long enough to agonize the attending physician with the fear of horrid and fatal consequences—his tormenting imagination quickly depicting the lifeless body of a woman in labor, and the consequent grief, inquest and trial.

Nevertheles, anæsthetics, as the nullifiers of pain, mark a new epoch in medicine—a blessing. The dentist, surgeon, obstetrician, and the general practitioner, are all called upon to use it. It removes the sting of disease, operations, and the cursed

pain of child-birth. Man's punishment is to obtain his food by the sweat of his brow—hard labor! and woman's to have pains in child-birth. But the law is satisfied, and now, since man is blessed through christianity with *labor* saving machinery, that he may no longer toil, woman in child-birth must not judicially and cruelly be denied chloroform, her pain-saving boon in labor.

Hear the testimony of a lady on this point. "I inhaled the chloroform by applying the mouth of the phial to one nostril, whilst for safety I breathed the atmosphere with the other; and without disturbing consciousness or pulse, the tremor, physical and mental, from fear of the approaching labor, which agitated my whole frame, gave place to a most delightful soothing; the subsequent grasping pains were subdued, and the ordinarily severe forcing pains at the close were rendered altogether tolerable. I now, she adds, look back with gratitude at the whole course of the labor as divested of its accustomed dread and pain."

In view of such testimony it becomes an important question, whether the physician, whose proper position is that of a servant to remove not only disease but suffering, is at liberty to withhold that, which is not the property of the physician, but the boon for suffering humanity—a gift of christianity—especially so to woman in her agony.

These pain-saving agents have also enlarged the domain of surgery, greatly diminished the mortality of its operations, and are making it more popular and applicable. Operations are by them rendered practicable, which otherwise could not be so from their duration, frightful character and extreme and protracted painfulness. They prevent the *deadly shock* from acute and protracted pain which the surgeon otherwise inflicts; how many from the *shock* of the operation have died! By the formation of the sentiment that the capital operations are painless, they will make the *early* resort to them more customary. Here is a most invaluable benefit. The surgeon is no longer the butcher-knife-man! His sternness gives place to benignity, and his relieved patient awakes to the joy that without suffering he is restored to health. As the office pupil of the late Dr. Physick, and subsequently for years an observer of European surgery, especially that by Dupuytren at the Hotel Dieu, it is my painful testimony that capital operations, without anæsthetic agents, have heavy

mortality; the surgeon, like the soldier, may boast of his nerve and firmness, but he must weep over the slain. How true is this in regard to the mortality from lithotomy. The cause is evident; none, not even the most intelligent, far less the uneducated, have submitted to this fearful and hazardous operation—a choice between inevitable and possible death—until the bladder and contiguous parts have become congested, irritated and disorganized by innumerable fits of stone, the calculus augmented in size, and mortification from the operation hazarded. But now by chloroform and early application, this dreadful operation has become painless and successful.

In respect to dentistry, the extraction of not only a tooth, but of many teeth at a sitting, has become painless and safe.

As to its modus operandi, Dr. Simpson and others have considered it that of asphyxia, a state of direct and immediate pulselessness. But a minute observation of its phenomena will distinguish them from those of all the recognized forms of asphyxia. These relate directly rather to blood; those in question to nerve; and may therefore be better explained by the Hall doctrine of the nervous arc.

The animal surfaces more especially the dermel and mucous, are esodic nervous surfaces. They have the spreading terminals of the esodic nerve of sensation. These terminals being directly impressed by chloroform, their function is suspended without otherwise affecting the constitution. Continue the application, and the sensorium becomes affected, and thereby consciousness is suspended; still further continue the application, and the heart's action is arrested. Thus we may properly deduce three stages in the action of chloroform; 1st, loss of sensation of the esodic surface, partial or general; 2d, loss of sensation, and consciousness; 3d, loss of sensation, consciousness, and pulsation, which last being continued becomes death.

The first of these stages is entirely safe; the second may also be considered without positive danger; but the third is fearfully hazardous. These stages may well be represented by the three breakers on the sea shore; to bathe in the first is safe, in the second approaches the verge of danger, and in the third is to be the undertow and death.

The intelligent dentist may then safely use chloroform if he *limits* its effect to the said primary stage, beyond which he

need not extend it. A lady urgent for its benefit in the extraction of some teeth, breathed the chloroform a few seconds without the least affecting consciousness. After which the gums were immediately cut, she then declared that she felt the instrument moving about the crown of the teeth, but that it produced no pain. Again, in like manner, the agent was administered, and then three large teeth were successively extracted. She testified that she felt all the manipulations, but that they were each and all of them painless.

Dr. Emerson observed that in regard to the agencies by which unconsciousness to pain was induced, there were some phenomena connected with the nervous system and its mysterious functions, which he thought had not been generally recognized, or if noticed, not regarded with the attention which they deserved. He referred to the power of suspending sensibility exhibited by many persons subjected to pain.

The mesmerists, he said, claimed this power as one of the results of their manipulations, and many cases are related where cancerous breasts have been cut out, and other most formidable operations performed on patients previously mesmerized, who declared they were free from pain whilst under the hand of the Surgeon. He would not dispute the facts in such cases, further than to deny the necessity of any such fallacious agent as animal magnetism to induce the condition. The power evoked, through mesmerism, was doubtless exerted by the minds of very impressible subjects. He had often observed that certain persons seemed endowed with a capacity, on some occasions, to throw the ordinary functions of the nervous system "out of gear," to use a familiar term of machinists. Dr. Emerson related a few cases illustrating the subject. In one of these, he was assisting the late Dr. Physick in removing a tumor from the face of a young man who fainted. During the period of syncope, Dr. Physick observed how differently persons bore pain. Whilst once performing an operation of an unusually painful nature upon a man, and wondering at his not crying out with agony, he was surprised at hearing him calmly observe, "Dr. Physick, how very keen your knives are. It is really a pleasure to be cut with them."

The second case occurred under Dr. E.'s own observation, in

the person of a near relative, a young lady, who, whilst very young, would never suffer any thing to be done to her teeth. All kinds of entreaties and bribes were exhausted upon her, and the result was, that her teeth, being too much crowded, began to interfere with her pretty looks. As soon as she attained an age when these became more fully appreciated, she cheerfully consented to visit a dentist, who found it necessary to extract no less than five teeth, all strongly rooted. Being her attendant, he was extremely surprised by such an exhibition of fortitude in one whom he knew to be endowed with exquisite sensibilities; and asking her immediately after the operation, if she had not suffered intensely? was still more surprised to hear her say, that the only pain she had experienced was from the apprehension of the suffering he might have on her account. If mesmeric processes had been resorted to, this of course would have been considered a conclusive demonstration of their efficac y.

Dr. Emerson observed, that this boon, for such hethought this natural resource might appropriately be called, was most frequently possessed by persons endowed with exquisite sensibility, against the effects of which it might be regarded as a protection. Where the suspension of feeling was induced by mesmeric manipulation, he considered the phenomenon as altogether the result of that extraordinary power which the mind, when deeply impressed by a sense of mystery, or some other obscure agency, could exert over the nervous system, and both with such agencies and phenomena, it would be well for the profession to become better acquainted.

Dr. Evans inquired of Dr. Parrish whether in the course of his investigation into the effects of the inhalation of ether or chloroform, he had met with or heard of any case of deranged mental manifestations resulting therefrom? He had been informed of three cases said to have been produced by etherization, but had had no opportunity of verifying the statement, and he would feel much indebted to any of his professional brethren who had seen such effect resulting from the use of either of the anæsthetic agents, who would communicate it to him, or allow him the opportunity of observing it.

In regard to what had just been said by Dr. Emerson in rela-

tion to some peculiar power in the human system to suppress the feeling of pain, he thought that whenever insensibility to pain, under causes usually producing it, existed, it must be the result of disease in the nerves or centre of sensation; and he had repeatedly witnessed cases of this kind. In two instances of men deprived of the use of their reason, who had come under his notice, the sense of feeling was so completely destroyed, that they respectively stood near enough to a hot stove to burn the glutei muscle so deeply that large sloughs came out, and yet were not aware of it at the time. They appeared otherwise to enjoy good health. And at the present time he had a lady under his care, who, in the early stages of her disease, which appeared to be spinal, was so completely deprived of feeling that a pin could be thrust into her flesh almost anywhere, without her being conscious of it. It was upon this sensitive portion of the nervous mass that the anæsthetic agents acted. From theorising on the action of these agents he had been decidedly opposed to their use; but having been invited by Dr. Horner to be present at his operations before the class at the University, in 1850–51, he had seen them used there very freely, and with the happiest results, so that he had been induced to alter his opinion, and he considered their employment justifiable, where extensive operations, usually giving rise to great pain, were to be performed.

Dr. Wiltbank said, that as he had been among the objectors to the use of anæsthetics in midwifery, he felt it incumbent on him to make a few remarks. Until within the last year he had opposed these agents on theoretic grounds. He feared that they would subject the parturient female to danger from lacerations, hemorrhages, convulsions, fevers, and many other evils. He had argued himself into the belief that they must, almost necessarily, injure both mother and child. The accumulating testimony in their favor, however, and the urgent solicitations of his patients, induced him to give them a cautious trial; and he must say that his opinions had undergone a very material change. He found that he had exaggerated the objections and undervalued the advantages to be derived from them; but he could not endorse the opinions of those who advocated their employment in all, or even a majority of labors. Like every other article in the Materia Medica,

anæsthetic agents should be restricted to the proper cases. Their *great* use, he thinks, is to allay excessive, irregular and inefficient pains, to promote sleep and to prevent exhaustion. To illustrate his meaning, he cited two interesting cases. The first was that of a lady he saw in consultation, who had been in active labor sixty hours. The membranes were ruptured, the head large and firmly ossified was immovably fixed in the superior strait, and although the pains were frequent and severe, no advance was made. Her general system was dangerously suffering from the long continuance of the pains and the loss of sleep. Ether here acted like a charm. It allayed pain, secured sleep, and refreshed and invigorated the patient. The use of the anæsthetic agent was kept up, with occasional intermissions, for thirty-six hours, and he thinks that without it, her life must have been inevitably lost; she recovered well. A second case, still more strikingly illustrative of the benefits of anæsthetics, properly applied, fell under his notice. This was a lady, who, when near the close of gestation, being exposed to cold in attending upon a sick child, was seized with severe and continuous pains. The whole abdomen was hard, the body of the womb firmly contracted, and the pains violent and without any distinct intermission. The os uteri, however, was unaffected, and there were no signs of labor. She was bled, and took opiates and antispasmodics in large and repeated doses without any relief. The pains increased until the patient was almost frantic with suffering, and still there were no signs of labor. Chloroform was given with delightful effect. The pains were instantly arrested, the irregular contractions were subdued, and the patient slept sweetly. In fifteen minutes she awoke with slight bearing pain; the os was now found to be dilating, and in one hour and a half the delivery was safely and easily accomplished.

## BIBLIOGRAPHICAL NOTICES.

*Illustrated Manual of Operative Surgery and Surgical Anatomy*, By MM. Cl. Bernard and Ch. Huette; *edited with notes and additions, and adapted to the use of the American Medical Student*, by W. H. Van Buren, M. D., Surgeon to Bellevue Hospital, &c., and C. E. Isaacs, M. D., Demonstrator of Anatomy College of Physicians and Surgeons, New York. *Illustrated with steel engravings from drawings after nature*, by M. J. Léveillé, *designed to serve as a companion to the ordinary text books of Surgery.* New York, H. Bailliére, 290 Broadway, 1852. Part I., pp. 84, and 26 plates with 130 figures.

The rather lengthy title here presented will afford our readers a good idea of the very handsome book which is thus offered to their notice. We need say nothing in commendation of the French original. Its reputation as a convenient and beautiful elementary atlas of operative surgery, has long been established; and many of the plates have recently become still more widely known, through the excellent American copies of them in the published parts of the operative surgery of Dr. H. H. Smith. The translators are men of tried ability and fitness for their undertaking, and we doubt not will acquit themselves in the very best manner of the task before them. This they appear to have done fully in the part now issued; but we hope to be able to speak more at large and decidedly in this connexion, after the remainder of the volume has arrived. In the mean time it may be well to note a few matters of interest in regard to the character and contents of the part before us, as well as to the views and intentions of the American editors, according to the language of their preface.

These gentlemen "flatter themselves that they have contributed to the supply of a want which has not been unfrequently experienced heretofore, viz: a complete and concise picture of the science and art of operative surgery, in its present advanced and perfected condition, in a portable form. The admirable and extensive works of Bourgery and Jacob, and Velpeau with the

translation of the latter under the auspices of Prof. Mott, and the equally excellent treatise on operative surgery by Prof. Pancoast of Philadelphia, can never be replaced by the present work. Yet its compactness and portability will render it more desirable to the student as a companion in the lecture and dissecting room, where its copious and graphic illustrations will assist him materially in acquiring correct general ideas as to the nature and objects of the individual operations of surgery; whilst for more minute and varied details with regard to their history and numerous modifications, the less accessible and more expensive treatises alluded to, can be consulted at a more advanced period of study. In fact, they are better calculated for works of reference to the practitioner of surgery, than as text books for the student, designed to set forth concisely the elements of the art. Our manual, whilst it is intended mainly to illustrate the intricacies of operative surgery, by appealing to the eye as well as to the understanding of the student, and by familiarizing him with that most useful department of anatomy which relates to surgical operations, will also be found, it is hoped, not entirely useless as a work of reference to those already engaged in practice."

We are glad to learn further, that in the fulfilment of their plan the translators have especially endeavored "to Americanize the language of the work to as great an extent as possible, making use of the terms in ordinary use in this country by teachers of anatomy and surgery, in order that the American student may not be annoyed by meeting with foreign modes of expression with which he is not familiar, and which, in their opinion, it is rarely desirable to introduce into common use."

The first six plates are devoted to the representation in some forty-eight figures of the "Instruments employed in Surgical operations." These, as a matter of course, are all French, and after the patterns of Charriére. Among them we have, 1st, instruments required for making incisions; 2d, those required for ligature of arteries; 3d and 4th, those required for amputations; 5th and 6th, for exsection of bones. Next in order come the operations themselves; and here again we have six preliminary plates occupied, this time, with various minor or elementary manipulations, such as incisions, union of wounds, the employment of the seton, vaccination, scarifications, acupunc-

ture, the anatomical and operative surgery of bleeding in different parts, including arteriotomy; and lastly, the ligature of arteries in general.

After these are exhibited, an admirable series of illustrations of the surgical anatomy and operative surgery, side by side, of the ligature of arteries in particular, begining in plate vii., with the surgical anatomy and ligature of the ulnar and radial arteries, and ending in plate xvii., with the anatomy and ligature of the femoral artery under Poupart's ligament, of the external iliac and epigastric arteries.

The remaining eight plates are occupied with the several amputations through the joints, or disarticulations. These engravings, being duplicates of the Parisian originals, we need hardly say are splendidly executed and printed, and in every way adapted to the purpose for which they were designed. The letter press accompaniments are brief but concise and clear, and appear to be rendered into English faithfully and elegantly, without any sacrifice of perspicuity. They afford all the assistance that would be looked for in a work that is manifestly one of graphic demonstration and illustration, rather than of written description. The annotations of the Editors, which are very modestly appended, seem to be judicious and appropriate; and thus far likely to increase the value of the book to the American reader. We cannot take leave of them, however, without a word or two in relation to the foot-note on pages 19 and 20, in which, what *we* call the Philadelphia needle, is spoken of as the artery-needle, "which bears the name of Prof. Mott," and is "also known as the American needle." Now, although we have no violent objection to its designation as the American needle, we decidedly protest against its being called after its distinguished New York advocate and endorser. It is well known here that Prof. Mott had nothing whatever to do with the contrivance of the instrument in question, or with its first employment and description. The merit, such as it is, belongs to the late Dr. Joseph Parrish, of this city, who published a full account and engraving of it in the Eclectic Repertory, many years ago, (vol. 3, p. 229, Philadelphia, 1813.) Wherein he expressly and repeatedly attributes its invention to Dr. J. Hartshorne and himself, aided by the ingenuity of Mr. John Rorer, of this city.

We regret that the editors did not happen to refer to the additional article on aneurisms in the New York translation of Velpeau's Operative Medicine. The note at the foot of page 302, (vol. 2,) would have at once reminded them that Prof. Mott distinctly admits his favorite needle to have been the joint production of three Surgeons of Philadelphia, Drs. Parrish, Hewson and Hartshorne. Surely if a special name were needed, here was choice enough without wandering quite so far from home. The mere question of name is a matter of small moment practically, beyond a doubt; still it is a matter of history, in which is involved a principle not less important in small things than it is in great —we mean the principle of *suum cique.*

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*Outlines of the Nerves, with short descriptions, designed for the use of Medical Students;* and *Outlines of the Arteries with short descriptions, designed for the use of Medical Students.* By JOHN NEILL, A. M., M. D., Surgeon to Wills Hospital, Demonstrator of Anatomy in the University of Pennsylvania. Second edition, Philadelphia, Barrington & Haswell, 1852.

We are glad to see that the favorable prognostications in relation to the early edition of these convenient "hand books" have been realized by a call for a new edition. As guides to the student in the lecture and dissecting room, we most cheerfully recommend them.

# THE MEDICAL EXAMINER.

PHILADELPHIA, APRIL, 1852.

Several communications, and bibliographical notices, intended for this number, have been unavoidably postponed for want of room. We ask the indulgence of those who have sent their works to us for review.

## MEDICAL NEWS.

*Philadelphia County Medical Society.*—At the Annual meeting held on the 20th of Jan. last, the following were elected Officers of the Society for the current year:

*President*—Samuel Jackson, M. D.

*Vice-Presidents.*—John F. Lamb, M. D., and Isaac Parrish, M. D.

*Recording Secretary.*—D. Francis Condie, M. D.

*Corresponding Secretary.*—Henry S. Patterson, M. D.

*Treasurer.*—Wm. Byrd Page, M. D.

*Censors.*—E. F. Leake, M. D., N. L. Hatfield, M. D., Lewis Rodman, M. D., Wm. N. Johnson, M. D., Wm. Henry, M. D.

At an adjourned meeting of the Society held February 10th, 1852, the following were elected:

*Delegates to the American Medical Association.*—Samuel Jackson, (Professor), Benj. S. Janney, Lewis Rodman, Chas. D. Meigs, Robert A. Given, Chas H. Bibighaus, Thos. H. Yardley, Thos. F. Betton, Wm. H. Klapp, Isaac Parrish, D. Francis Condie, Wm. Darrach, Jno. D. Logan, and Jno. F. Lamb.

*To the Pennsylvania State Society.*—Isaac Hays, Geo. B. Wood, Wm. Pepper, Geo. Fox, Samuel Jackson, Geo. W. Norris, Paul B. Goddard, John F. Lamb, A. Naudain, Samuel Jackson (Professor), G. Emerson, Henry Bond, Alfred Stille, Thomas D. Mütter, Jos. Pancoast, Wm. Mayburry, D. Francis Condie, Henry S. Patterson, Francis West, Isaac Remington, I. M. Pugh, Thos. F. Betton, Wm. R. Grant, Joseph Warrington, C. H. Bibighaus, Wm. Henry, Edward Janvier, and G. W. Patterson.

It was *Resolved*, that should any of the Delegates thus elected be unable to attend the approaching Session of the American Medical Asso-

ciation or State Society, or if he has been elected a Delegate from any other body to the former, he be requested and empowered to appoint some other member of this County Society as shall be able to attend as his substitute, and that such appointment, set forth in writing, and signed by the Delegate by whom it has been made, shall serve as the credential of said substitute.

DELAWARE COUNTY MEDICAL SOCIETY.—Officers elected for 1852.

*President.*—Dr. Jesse Young, Chester.

*Vice-President.*—Dr. S. A. Barton, Aston.

*Secretary.*—Dr. Robert K. Smith, Darby.

*Corresponding Secretary.*—Dr. George Martin, Concord.

*Treasurer.*—Dr. M. Emanuel, Marcus Hook.

*Delegate to the American Medical Association.*—Dr. Robt. K. Smith, Darby.

*Delegates to the State Society.*—Drs. Smith, Emanuel, Martin, and Barton.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION, APPOINTED BY THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—John Rodman Paul, G. Emerson, Francis West, Alfred Stillé, John Neill, W. S. W. Ruschenberger, S. L. Hollingsworth, Geo. B. Wood, Caspar Wister, Isaac Hays, Rene LaRoche, John D. Griscom, John B. Tuft, Francis G. Smith, Anthony E. Stocker.

PHYSICIANS' PRESCRIPTIONS.—The report of the joint committee of the Philadelphia County Medical Society and Philadelphia College of Pharmacy, on this subject, published in our number for January last, was unanimously adopted by the County Society at its Annual meeting held January 20th, 1852, with this proviso:

"That nothing therein contained shall be construed into any sanction or countenance, direct or indirect, on the part of this Society, of the manufacture, sale, or use, by any one, or under any pretext, of quack or secret medicines."

APPOINTMENT IN THE UNIVERSITY OF NEW YORK.—We have great pleasure in announcing that the chair of Anatomy in the University of New York, vacated by the death of Dr. G. S. Pattison, has been filled by the appointment of Dr. WM. H. VAN BUREN; a gentleman admirably calculated to occupy, with credit to himself and profit to the school, so distinguished a post.

We make this announcement with the more pleasure, as it enables us

to correct an unintentional error in our last number, in regard to the *rumor* that application had been made to a gentleman in this city, prior to Dr. Van Buren. We have the best reason for believing this to be a mistake. Dr. Van Buren was the first choice after Dr. Pattison's death. Our information was derived, in the first instance, from a New York daily paper.

ITCH INSECT.—Most of our readers must have seen the *Acarus scabiei* under the microscope, or are at least acquainted with the figures of the creature which have been published. It appears that the male insect has, until lately, eluded observation, but has been at last dragged into light by M. Lanquetin, of Paris. The amiable parasite is described in the "Union Médicale," and is said to be only half the size of his better half.

SPREAD OF DISEASE AND FEVER IN IRELAND.—In our last we felt it our duty to allude to the alarming increase of contagious and infectious diseases amongst the poor in Ireland. We regret to find that our worst fears are likely to be realized, and that there is every prospect of that ill-fated land being further made desolate by fever, engendered by famine and neglect. According to the last report of the physicians of the South Dublin Union, the state of that workhouse is frightful to contemplate. Those gentlemen say that, in addition to the usual disease contingent on the season, the house has been visited by severe epidemic suffocative catarrh, also by a new form of febrile epidemic, in addition to a large amount of measles. They also reported forty-six cases of a malignant character, and that in the sick and infirm wards, the patients amounted to the formidable number of 1371. In consequence of this extraordinary increase of disease, the physicians have demanded additional help.—*London Lancet, Feb. 14th,* 1852.

AMERICAN MEDICAL ASSOCIATION.—The fifth annual meeting will be held at Richmond, Va., on Tuesday, May 4th, 1852.

All secretaries of societies, and of other bodies entitled to representation in this association, are requested to forward to the undersigned correct lists of their respective delegations as soon as they may be appointed.

The following is an extract from Art. II. of the constitution.

"Each local society shall have the privilege of sending to the association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half this number. The faculty of every regularly constituted medical college or chartered school of medicine shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital containing a hun-

dred inmates or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate."

The medical press of the United States is respectfully requested to copy.

P. CLAIRBORNE GOOCH, *One of the Secretaries*,
Bank-street, Richmond, Va.

DISCONTINUANCE OF THE BRITISH AMERICAN MEDICAL AND PHYSICAL JOURNAL.—We learn, with much regret, that this excellent Journal published at Montreal, Canada, under the able editorial conduct of A. HALL, M. D., has been discontinued.

ETHERIZATION IN PARTURITION NINETEEN YEARS AGO.—DR. WALTER CHANNING reports in the Boston Medical and Surgical Journal, for March 10th, 1852, the following interesting details on this point. Dr. Channing was recently attending a case, in which he administered ether with "excellent effects." In his visit following the delivery, he asked his patient "how many times she had used ether. She named them, and added that there was one other time in which she used it with great advantage. I asked when. Nineteen years ago, she said, she gave birth to her eldest son. Her labor lasted more than a fortnight. In the absence of her physician, her husband tried to find something which had given some relief in her former and first labor. He failed; but being engaged in preparing a chemical lecture, and making experiments with sulphuric ether, he thought he would try that. It was wiped freely over her face, and forehead, and *breathed*. To his surprise all her distress passed away—the spasmodic twitchings disappeared—violent voluntary effort, and which constituted so much of her misery then, and has in all subsequent labors, ceased to annoy her. Her physician arrived, and was so much pleased with the effects of the ether that it was employed during the rest of the labor. Her labor was now easy, was soon completed, and a stout living boy born. Such was her account of her first use of sulphuric ether to diminish or to abolish pain."

MEDICAL CIRCULARS.—Such is the competition in medical instruction, in this country, that even the schools of medicine of some of the States appear to be earnestly drumming up the people for customers. Circulars are actually flying through the post offices, announcing the facilities, economy, &c., of certain institutions for next November. This is taking time by the forelock; but it is positively injuring the medical character of the United States, to make such a show of ambition to gather up students.—*Boston Med. and Sur. Journ. 10th March.*

Remarkable Case of Inanition.—The following extraordinary occurrence is detailed in a late number of the Kingston (Ky.) Republican :

"On the 29th ult., a negro woman belonging to Mr. J. Harpending, of this County, got lost in the woods. Mr. H., thinking she had been stolen, offered a reward for her. He heard nothing of her until the 11th inst., when some boys who were hunting, found her, apparently dead. They returned home, and informed some gentlemen of the fact. Messrs. B. W. Harpending, E. George and one or two others, went in search of and found her, almost covered with snow; and supposing, as a matter of course, that she was dead, one of the party started to get a slide, while the others struck up a fire and awaited his return. One of them, wishing to see if decomposition had taken place, touched her with his cane, when, to his astonishment, she slightly moved her head. After applying the usual remedies she recovered sufficiently to converse with them. She stated that she had not eaten or drank anything but snow since she left home, and had been out in the weather all the time—fourteen days. She is in a fair way to recover. When she left home she was very fleshy, but when found was perhaps the most emaciated creature ever seen alive. These facts can be substantiated by the testimony of some of the most respectable men of our county."

University of Louisville Law Suit.—We learn with pleasure, that a suit pending between the City of Louisville and the Board of Trustees of the University, has been decided in favor of the latter. A provision of the new City charter had given the election of the Board of Trustees "to the people," but the Court has decided this to be unconstitutional, and "the administration of the school remains in the hands where it was."

Resignation of Dr. John Bell.—Our esteemed townsman has resigned his Chair of Theory and Practice in the Medical College of Ohio, and returns to Philadelphia at the close of the present term.

Obituary.—We announce with deep regret the sudden death of Dr. Wm. R. Grant, *Professor of Anatomy in Pennsylvania Medical College.* Dr. Grant, by his amiable deportment, high professional and moral worth, had secured the esteem of all who knew him. His loss will be deeply felt by a large circle of friends, and by the School of which he was a valued member.

## NEW LIGHTS AND NEW LIVERS.

"When music, heavenly maid, was young,"
Rudely in ancient Greece she sung,
Now modern Grease usurps the song,
And smooths the rugged verse along.

In former times before the day
Of wisdom dawned upon our way,
And gave the medical profession
Her highest gifts in full possession,
Granting these choice Disciples' skill,
To bind on earth, by draught and pill,
And not to loose, as might befall,
This erewhile chosen Israel,
Before in chorus had been sung
"Jam Satis," ancient Fogydom,

Consumption, as tradition runs,
Made man expectorate his lungs;
Untaught there lay, by grace of God,
Salvation for him in a Cod;
Unmeet, the mystery to explain,
O'er which Theologians rack'd the brain,
How stretched upon Samaria's field,
His very soul in act to yield,
The dying traveller was restored,
When o'er his wounds the oil was poured.

Untaught that here, in meaning full,
Was hidden prophetic parable,
Which Providence would us inspire
To read by inspiration higher
Than e'er Joe Miller read Isaiah;
That figuratively fallen in strife,
'Twas Phthisis threatened here a life,
And fled when oil the wounds had dressed,
"Genuine cod liver, cold expressed."

And little thought those rugged hands,
That, round Newfoundland's stormy sands,
From Ocean's depths drew forth their prey,
All struggling to the light of day,
That Irish girls might harmless dine,
Spiritual and temporal combine,

To cheat Satanus of his toll,
By Friday's strengthening of the soul,
That they were adding to heaven's Will
An unexpounded Cod-icil.

Nor dreamed each fish at middle bore,
(When science taught us to explore,)
Both lives and liver for their turn,
Like archers true at Bannockburn,
That there displayed in full essence,
Was fount of rejuvenescence,
Which dull De Soto would have laid
In Florida's dark everglade;
When, heaven inspired, he might have drank,
Rich purling from Newfoundland's bank.

Unchanged as food, now altered its effect,
Now used by election, once by the elect;
Then, "Aid us Maria, in all ill,"
Now Gadus Morrhua be our fill,
And erring man, with all his hopes at stake,
Is once more aided by an act of faith,
And Vomicas which, in their day,
Resounded with the "pôt fêlé,"
All teach auscultors to admire,
The "cracked pot sound" one story higher.

E're struggling infants from the womb
Their circulation can resume,
(Provided they've not come too soon,)
The attending surgeon seeks the loin,
And carefully explores the groin,
And if one gland he can discover
A hair's breadth fuller than another,
No modern surgeon here would miss,
Tuberculous Diathesis,
And straightway at his solemn nod,
The infant's suckled by a Cod.

Hail modern Grease, be thine a fame,
More than thy prototype could claim,
While modern doctors they confess,
Extremâ cerâ Cod-icis. YOUNG PHYSIC.

# RECORD OF MEDICAL SCIENCE.

## SURGERY.

*Wound of the Stomach with Protrusion.*—By W. ASHBY, M. D., of Culpeper, C. H., U. S.—A negro boy, aged 6, the property of Mr. R. B., fell upon a pair of sheep-shears, which he had in his hand, whilst running down a hill. The instrument penetrated the stomach obliquely from above, just grazing the left side of the sternum and edges of the ribs, making a flaplike orifice in the integuments. I was called in consultation by my friend, Dr. P. C. Slaughter, and found nearly the whole stomach protruded, and discharging its contents through an aperture about three-quarters of an inch in length. Aware of the controversy which has so long existed among able surgeons, on either side, as to the propriety of stiching the stomach or bowels, the everted edges and gaping appearance of the wound in the stomach made it necessary, I thought, that a stitch should be taken. To avoid irritation, as much as possible, with the finest needle and silk I ventured to take a single stitch through the middle of the wound. Before I saw the case, Dr. S. had made some efforts to restore the organ to its natural position, but it did not occur to me at the time that I should have any serious difficulty in replacing it, at least after enlarging the orifice a little. But such was the unruly nature of the boy—his violent screaming and resistance, the nausea and vomiting which constantly attended the handling of the stomach—that notwithstanding I enlarged the orifice several times to a considerable extent, our best efforts not only failed to restore the organ, but it seemed to protrude the more. At this juncture, fearing the irritation resulting from further efforts, I suggested the use of chloroform, notwithstanding the necessary delay of having to send several miles for it. Whilst under its influence, I found it necessary again to enlarge the aperture slightly, and then had no farther difficulty, although the boy vomited as freely as before from handling the organ. The wound of the integument was rather ragged in its appearance, and of course a little bruised by our efforts. The wound of the stomach was brought directly opposite the tegumentary wound, and gently retained within its verge. A single stitch, patent lint, with cold water and a bandage completed the dressing. The patient was placed on his side, absolute rest enjoined, and soon afterwards a large dose of opium was administered. From the time of the accident until the completion of the dressing six hours intervened, and yet the boy retained his strength most remarkably. Under the influence of the opium our patient rested well the first night.

2d day. This morning the pulse is a little excited, and face flushed. V. S. to make a decided impression; and this was repeated twice during the day, and opium after each bleeding—absolute diet enjoined—but the boy desires no food.

3d. The wound had a healthy appearance, but tenderness of the abdomen and tympanitis greatly increased our fears as to the result. The pulse feeble and quick; the bowels not moved since the accident. Turpentine enema and a succession of blisters were ordered, and after the bowels were moved the opium was resumed.

4th. Our patient evidently improved, tympanitis and tenderness diminished, pulse more quiet, countenance and general aspect of things more encouraging; takes a little hot water tea this morning for the first time; gum water and opium continued.

5th. The wound not healed by the first intention; has a dark spot immediately over the wound of the stomach, and is discharging a very offensive sanious matter. A soft poultice, and the same prescription continued.

6th. The ligature came out this morning. The same prescription continued. From this date the boy gradually recovered, without any particular change in the treatment.

*Remarks.*—1st. It has occurred to me, that possibly it would have been better for me to have restored the stomach, at least partially, before the stitch was taken, as I ran the risk of breaking out the ligature by the subsequent efforts at reduction; and I am sure that the accumulation of gas, though some escaped with an audible sound several times, did not increase the difficulty.

2d. This case was admirably adapted to the use of chloroform, and illustrates most happily its incalculable value when used with discrimination.

3d. As your journal is eminently practical in its character, for the benefit of the younger members of the profession, it may not be amiss to allude briefly to what I conceive to be a most important principle in our profession, viz., that an *inflamed or diseased organ must have rest.* In this case, the stomach instinctively sensible of its wounded and disabled condition, refused most emphatically, for four days, to receive any nourishment—not even gum water—and but very little of anything for about ten days, notwithstanding the entreaties of master and friends, contrary to our orders.

An inflamed eye instinctively excludes the light from itself, so that the physician who interrogates Nature intelligently, at once gets the idea of confining his patient to a dark room, and thus putting the organ entirely to rest. When the lungs are inflamed the patient breathes as much as possible by the abdominal muscles, and lymph is thrown out, gluing the organ to the side, doubtless to prevent motion and friction as much as possible. The same thing is true of inflamed bowels; and because some constipation, the result of this principle exists, I have known great error—and I may say even death—to result from goading and stimulating the organ with drastic purgatives. This principle of rest is susceptible of very extensive application in practice; and any inflammation can be cured, I believe, to which it can be applied. The immortal Physic, always true to the laws of Nature, recognized this principle in the treatment of coxalgia and other diseases of the joints. In conformity to this important law of the animal economy, in the above case, we gave opium freely, to prevent nervous and vascular reaction; and by thus aiding in keeping the wounded organ in a profound state of repose, it contributed, it is believed, no little to the favorable result.—*Stethoscope, (Virginia,) United States.*

THE

# MEDICAL EXAMINER,

AND

## RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. LXXXIX.—MAY, 1852.

## ORIGINAL COMMUNICATIONS.

*Notes of a Case of latent Phthisis pulmonalis terminating suddenly in Pneumothorax.* By F. W. SARGENT, M. D., one of the Physicians to the Girard College.

Wm. McLaughlin, æt. 13, lost his parents and several brothers and sisters from consumption. He was rather under the ordinary size of boys of his age, possessed of but little muscular vigor, and was indisposed to indulge in the out-of-door sports of his companions. During the three years of his residence at the Girard College, he was not at any time sick, though he was always looked upon as "delicate." He had had a slight cough from time to time, after special exposure; but he had no chronic or habitual cough, as I am assured by the Governess who had charge of the division in which he was, and who, at night, occupied a room adjoining that in which he slept. And no one of his friends recollected his having been severely sick at any time previous to his admission to the College. His skin was thin and white; his face freckled; his hair of a bright red color; mental powers not much above mediocrity.

The first occasion of his being in the Infirmary for medical

treatment, was on Saturday, December 20th, 1851, when he complained simply of feeling a little unwell, without giving any definiteness to his complaints; this was in the evening, and he had in the morning voluntarily accompanied some visitors to the top of the college building, a feat which involves considerable fatigue to those who are feeble. He remarked that he thought he had taken cold from exposure on the roof of the College, where there is always a considerable breeze.

He slept soundly on Saturday night, and on Sunday morning said he felt quite well. He informed the nurse that he had not had an evacuation of his bowels on the previous day, and she accordingly gave him a dose of castor oil, which he immediately rejected from his stomach; and as he continued to feel sick, with a sensation of oppression at the epigastrium, a teaspoonful of Coxe's hive syrup was administered, which he threw up speedily, and with relief to these symptoms. The act of vomiting in both instances was easy and unattended with straining.

Toward evening, he became feverish, and I was sent for to see him. He complained of soreness and pain at the lower part of his chest, in front and on the left side, aggravated by coughing or any violent or prolonged action of the respiratory muscles, but not partaking of the characters of the pain of decided pleurisy. His cough was frequent, hard and dry; pulse frequent; skin hot and moist. His decubitus was easy, though he preferred lying on his back or on the right side. The percussion was resonant, and about equally so on both sides of his chest; the respiratory murmur was somewhat more feeble and less completely developed on the left than on the right, unmixed with râle of any kind, however. In the examination of his chest I was struck with his thinness; there seemed to be no fat about his chest or arms, and the muscles were small and soft.

In the absence of any positive indication of inflammation of the lungs, bronchial tubes, or pleuræ, and hoping that the case would prove to be a rheumatic attack affecting chiefly the parietes of the thorax, I directed that his chest should be well bathed with a warm liniment composed of laudanum, spirits of camphor, and olive oil, and subsequently covered with a warm poultice of hops—both to be repeated from time to time; and that he should take, every two or three hours, according to circumstances, 1 gr. of nitrate of potassa, with 2 grs. of Dover's powder.

He slept none during the night, but coughed very frequently and with violence, without expectoration; the soreness and pain in his chest continued but little abated by the applications which were made, and by the Dover's powder; although there was no great aggravation of these symptoms, nor any sudden accession. Early in the morning, however, he complained of increased soreness at the top of his left chest, and his cough became rather more violent in its paroxysms.

On my visit at 9 A. M., Monday morning, I found his breathing more frequent and more labored; his cough also increased; the pulse more frequent, and the skin hotter; the left side of the chest was tympanitic on percussion, and distended with air which elevated the intercostal depressions, and rendered this side of the thorax more full than the other; the heart was a little displaced towards the median line of the sternum, and the vesicular murmur was replaced by bronchial respiration, amphoric respiration, and, occasionally, "metallic tinkling." In short there was undoubted "*pneumothorax.*" And, in view of the boy's appearance and history, and the fate of his parents and other relatives, there could be little question that a *tubercular cavity* had opened into the pleural sac.

A blister was applied to the left side of the chest; the nitre and Dover's powder were continued, arrow-root boiled with milk and chicken-tea were directed to be given in small portions and as frequently as he might desire; (he had no appetite, and would take but little nourishment.)

In the evening his condition seemed to be about the same as in the morning. Conditional directions were given as to the administration of nourishment, and, in addition, of wine-whey.

During the night he slept at intervals, on one occasion as long as an hour and a half, being awakened by cough and dyspnœa. But at 6½ A. M., Tuesday, he suddenly experienced a sensation of increased oppression, and immediately said he thought he was dying. He died in the course of an hour from this time, his intellect clear to within a few minutes of his death.

*Examination twenty-six hours after death.*

Great emaciation of the muscles and integuments of the trunk, and limbs; posterior surface stained.

Both sides of chest resonant, left side tympanitic, and mea-

suring in circumference three fourths of an inch at its fullest part more than the right. A small puncture was made through the parietes of the left chest, and air rushed out audibly, and with sufficient force and volume to extinguish a lighted candle held near the orifice, the walls of the thorax on this side proportionally subsiding.

The left pleural cavity contained 1½ to 2 ounces of limpid yellowish fluid; soft lymph was adherent to the pulmonary pleura, and in less amount to the costal also, in flakes and more diffused patches, and the membrane was reddened in spots. The lung had collapsed, containing little or no air; but it was perfectly free from any adhesion, excepting at a circumscribed spot just below the apex, in front, where there was a firm, fleshy looking mass of fibrin, about a quarter of an inch in length, which connected the two surfaces of the pleura. Immediately beneath this adhesion was the perforation. The orifice was about as large as a crow's quill, round, its margins thin; it communicated, through the pleura, which was two lines in thickness, with an irregularly-shaped cavity as large as a hazel nut, free from any adventitious lining membrane, containing no secretion, and opening into a very small bronchial twig. The pulmonary tissue around this cavity was in an apparently healthy condition, excepting that it was of a dusky red color. At different points in the lung were several small crude, unsoftened tubercles; no tubercular granulations.

The right pulmonary pleura was closely adherent to the walls of the chest, by firm, old adventitious tissue, without any evidence of recent inflammation. The lung was filled with air, and its texture generally presented no abnormal appearance, excepting from a moderate degree of vascular turgescence, and the presence of a few crude, unsoftened tubercles scattered here and there, in the midst of a crepitating pulmonary tissue. Near the apex, posteriorly, was, moreover, a small cavity of rather greater capacity than that in the left lung; around it, the texture was normally pliable and aerated; the outer wall of the vomica consisted merely of the pleura, which was thickened; the adhesions upon this side probably saved the boy from *pneumothorax* of the right cavity.

The lining membrane of the bronchial tube was uninflamed, although somewhat injected here and there.

The bronchial glands were generally enlarged, some of them tuberculous. No tubercles were found in the other organs.

The space already taken up by the simple narration of this case, precludes anything more than a mere allusion to its most interesting features. These are, the insidious manner in which the tuberculosis had progressed; the absence of symptoms, so far as we can learn, of the pleurisy of the right side, or of the local pleurisy at the summit of the left chest; the protective influence of the right pleurisy, as respects the superficial cavity in the corresponding lung; the occurrence of the perforation of the left pulmonary pleura, and the rapid supervention of the fatal termination. A *very minute* physical examination of the apices of the lungs, during life, would probably have revealed the existence of the cavities there; but this knowledge would scarcely have availed anything with reference to the treatment of the disease, or to the prevention of the pneumothorax. From all the facts of the case, it seems most reasonable to suppose that the rupture of the left pleura over the abscess, occurred during an act of violent coughing, early on Monday morning.

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*Note on Sulphate of Bebeerine.* By Henry S. Patterson, M. D., Professor of Materia Medica in Pennsylvania Medical College.

At a time when the discovery of a substitute for Sulphate of Quinia is a topic of general discussion, it may not be inappropriate to call the attention of the profession to a substance, heretofore noticed, but too generally neglected. The Sulphate of Bebeerine has been shown, by Dr. Maclagan, of Edinburgh, to be a medicine of very considerable anti-periodic power, closely resembling the corresponding salt of Quinia, and in many respects equal to it,—possibly superior. It is obtained from the Bebeeru or Green-heart (*Nectandra Rodiei*) of British Guiana, a tree of considerable size and extremely abundant. The bark yields the alkaloid largely, but it is particularly abundant in the nut. A decoction of the latter is the ordinary popular remedy for intermittent fever in Demarara, and, as I am informed by an intelligent gentleman of that place, seldom, if ever, fails to

arrest the disease. The nut may be collected in almost indefinite quantities, and could be obtained here, if a demand were created, for little more than the expense of collection and transportation. The process for separating the alkaloid is almost identical with that for quinia, and not more expensive. If, therefore, it proves on trial equal in efficacy to that alkaloid, we will have a cheap and effective substitute within the reach of all. The subject certainly deserves a more extended investigation than it has hitherto received. The object of the present communication is to invite attention to it, and induce the profession, in miasmatic districts, to give the remedy a fair trial.

Sulphate of Bebeerine occurs in shining brown plates, (sometimes with a greenish tinge,) is inodorous, and has a bitter, harsh, somewhat astringent taste. Like the Sulphate of Quinia, it requires an excess of acid for its perfect solution. It may be given in pill, solution, or powder. That it is a good general tonic, in small doses, is very evident. In the full anti-periodic dose it is more apt to disturb the stomach than the same quantity of Sulphate of Quinia, and occasionally vomits; but it possesses the advantage of being much less stimulating, and does not affect the head as that salt does. Dr. Maclagan asserts that it is "not so liable to excite the circulation or affect the nervous system," and Dr. Neligan adds, that "this conclusion is fully borne out by his experience." The patients who have used it under my care expressly state that it did not occasion in them the same headache and vertigo as the quinia had previously done. Its dose is stated at gr. i.—v., three or four times in the day. Neligan directs it made into pill with conserve of roses, or in solution with the addition of a few drops of Acid. Sulph. Arom. The anti-periodic dose may be stated at gr. xv.—xx.

A letter from my friend and former pupil, Dr. H. J. Richards, of Grey Town, Nicaragua, of the date of March 25th, 1852, contains the following: "I have used the Bebeerine, as you suggested, with uniform success in quotidian intermittents. I have since had no opportunity to prescribe it in remittents. All the intermittents of this coast, however, are comparatively easily treated at this season, and yield readily to both quinine and arsenic. The remittents and even intermittents of the fall months, are more virulent and often speedily fatal." Those

months will certainly furnish a fairer test of Bebeerine; but it is something to know that, under existing circumstances, it produces the same effect as the Quinia.

Dr. Watt of Demarara thinks that it is tardier in its effects than the Quinia, not interrupting the paroxysms so immediately, but he also thinks that its effects are more permanent. The cases in which I have had an opportunity of using it, seem to confirm the latter opinion.

1st. A gentleman residing in Blockley township consulted me in September last concerning an obstinate and constantly recurring tertian intermittent, under which he had labored for a length of time. He stated that the Quinia always interrupted the disease, but that it inevitably recurred in two or four weeks. I gave him Sulph. Bebeer. ʒss. dissolved in ʒviij. water, a tablespoonful to be taken every four hours during the apyrexia. The next paroxysm was prevented, and he has had no return of the disease up to the present time (April).

2d. A. J. applied to me in October last, with a very similar statement. While residing in New Jersey, about six years since, he had a violent and protracted "bilious fever," since which time he has had, every month or two, an attack of "intermittent fever," which has been generally speedily arrested by quinine. Such was his account of the case. I found his tongue furred, his eyes icterode, his breath offensive, his urine scanty and high colored. The anorexia was complete and thirst considerable. He had a daily slight chilliness, followed by considerable fever and a slight sweat. I gave him a mercurial purge and on the next day fifteen grains of the Sulphate of Bebeerine. He complained of some nausea, but no disturbance of the head. The same quantity of Bebeerine was given on the two succeeding days, when, the paroxysms no longer recurring, it was discontinued. He remains free up to this period (April), and says that he enjoys better health than he has done for years.

If the permanent character of effect, which these cases seem to indicate, should be established by a more extended experience, we will have in the Bebeerine an agent of very great value, adapted to cases which have hitherto seemed uncontrollable, except by arsenic, to which there are so many objections. It is also much more speedy in its effects than the arsenic. Bou-

chardat (Ann. de Therap.) expresses his surprise that the Bebeerine has been so entirely neglected in France, where trial is daily made in agues with substances of inferior efficacy. I trust that the same remark may not long be made with regard to the American profession, but that the precise value of the medicine may soon be established by an adequate extent of observation.

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*Case of Strangulated Crural Hernia successfully treated by Chloroform.* Communicated by ROBERT BURNS, M. D., of Frankford, Pa.

Joseph Eastburn, a middle aged German, employed in the chemical establishment of Mr. Lennig, of Bridesburg, of a spare habit but firm muscular fibre, had been afflicted with hernia for several years, and subject to diarrhœa. Not using the protection of a truss, his hernia became strangulated on Friday, the 26th inst., and being unable to reduce it as he had himself been in the habit of doing on former occasions, his family physician, Dr. Wiley, was called in, who by venesection, ice, taxis, &c., made every effort to restore the intestine, but without effect. On the evening of the 27th, Dr. Burns of Frankford was called in, when, on consultation, it was determined to bring the system under the influence of enemata of tobacco, and the internal use of tartarized antimony, and thus endeavor to reduce the hernia, which was ascertained to be a crural one. Our best directed efforts were still unavailing, and the operation being the last resort, it was arranged to send for Dr. Keller, of Philadelphia; and at early hour on the 29th, endeavor to rescue the sufferer from impending danger. By some delay in receiving the communication, Dr. K. did not arrive until after 8 o'clock A. M. In the mean time every preparation was made to operate should Dr. K. not come, or no other procedure avail. Dr. K. on examination of the patient, confirmed the diagnosis, and after considerable effort to reduce, the course was abandoned as altogether impracticable. From the tension and tenderness of the abdomen, we feared extensive intestinal and peritoneal inflammation; and before resorting to the knife, it was suggested to make a trial of chloroform; which being agreed upon, Dr. Burns hurried to Frankford, and

procured a reliable article, which was used in the following manner:—A piece of muslin sufficiently large to cover the hernial tumor was saturated with the chloroform, and applied to the part, over which a small compress was placed, to retard evaporation. Of this part Dr. Keller took charge, while at the same time, Dr. Burns applied the same agent to the mouth and nares, dropped on a piece of muslin, causing the patient to inhale it as freely as possible; thrice he inhaled fresh portions, and was brought under its influence, which made him very restless with constant endeavors to push us away, and struggling to rise up. At this moment, Dr. K. made the effort at reduction, which was entirely successful, and the opening under Poupart's ligament was plainly distinguishable, so as to admit the point of the finger. Our gratification was very great, our patient spared a painful and dangerous operation, his family and friends were full of hope, and another instance was added to the multitude of the past, in favor of the wonderful effects and immense value of chloroform, in the mitigation of human suffering. Could our sketch close here, our exultation would be complete; but far otherwise was the intelligence obtained on the morning of 29th, when to our sorrow, the radiance of hope was obliterated, by the sable curtain of death. Dr. Wiley informed the writer, that the compress and bandage which were applied by Dr. Keller until a truss could be procured, were detached by the patient getting out of bed, and the hernia reappeared, but was easily reduced by him; the patient however sank rapidly, and died at 1 o'clock, A. M., on the 29th. Dr. Wiley and the writer made a post mortem examination of the abdominal cavity, and a minute dissection of the inguinal region. The peritoneum was universally inflamed, together with the greater portion of the intestines, some parts of which were gangrenous, especially that portion of the ilium which was constricted. Both peritoneal and intestinal adhesions were extensive, besides perforations of the cœcum, with of course effusions and deposits of coagulable lymph; the hernial sac, as it protruded through the crural ring, was about the size of a hickory nut, and in thickness the sixteenth of an inch, its inner surface slightly inflamed, and the point of constriction evidently at the neck under Poupart's ligament, the falciform process of fascia lata being free.

Thus, from the condition of the abdominal viscera, no means

could have availed to save the patient, within the last twenty-four or thirty-six hours of his existence, at least if he had been operated on, death would have ensued, and the operation perhaps unjustly blamed. But may we not feel encouraged to expect from the use of the chloroform, at an early period of strangulated hernia, strong probability of success; as in this case it accomplished more than all other means.

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*Remarks on the Climate and Epidemic Diseases of Rangoon, Burman Empire.* By JOHN DAWSON, M. D. Communicated by J. Remington, M. D., of Philadelphia.

In the provinces of Burmah bordering on the sea coast, the seasons are uniformly regular in their appearance, and steady in their continuance. The year is divided into two seasons, viz. the dry and wet. From May to October is the south-west, or wet monsoon; from November to April is the north-east, or dry monsoon. In the rains, it sometimes pours down literally in *torrents* and for hours together. The average fall of rain from year to year, for a period of ten years, is about 175 inches, the minimum being 160, and the maximum 502 inches. The first half of the dry season is commonly called here "the cool season," which corresponds in some respects to the winter of temperate latitudes. The next half is hot, *hot, hot,* week in and week out, and no rain. The whole face of the country becomes parched and dry. The very leaves of the trees wither from the effects of a scorching sun, and the birds pant and droop their heads for want of a cool shade. After the first few showers of rain have fallen in May, all nature wakes up to new life and begins to revive. At the end of that month and early in June, the country is once more clothed in luxuriant verdure. But from an extreme of dryness and heat, we find ourselves very speedily led into an extreme of dampness and wet. Every thing feels damp and becomes mouldy. Books go to pieces in two or three years. Furniture held together by glue, or other adhesive matter, opens at the joints. At the coldest season of the year, the thermometer is down to 60°. In the hottest it is up to 112°. These are the lowest and highest points in which the mercury ranges in

this climate. Rangoon lies in latitude 62° 47′ North, and longitude 97° 15′ East of London.

Of epidemic diseases, there are but two which seem to visit Burmah, at least so far as I am now competent to judge, i. e., cholera, and small pox. There does not, however, appear to be any definite regularity in the time of their visitations. Except in the Tenasserim and Akracan Provinces, which are under the jurisdiction of the British Government, vaccination is entirely unknown. Inoculation is occasionally practised, though the manner of doing it, and the extent to which it is carried, I am at present unable to say. As the Burmese practitioners, however, appear to care little for the public welfare, and the government still less, there cannot be much done in this way to protect the people, or to modify the nature of that scourge. In the whole kingdom of Burmah, there is no hospital, no public dispensary, no almshouse, no asylum in existence, to which the suffering can look for aid, the "Missionary Dispensary" excepted. No provision is made by any one, either official or private, for meeting the wants of the poor, the afflicted, and the miserable. To be afflicted with leprosy, (and there are many such cases,) is "*a crime*," which exposes the sufferer to fine, imprisonment and slavery. To be insane is a *sin*, a *curse*, for which you receive but little pity or commiseration. The person so deranged, is supposed to be under the dominion of "*nats*," or evil spirits, for misdeeds committed in a former state of being; and he is allowed to drag out a wretched existence as a species of punishment. Such is the amount of their sympathy, and such is the form of their benevolence for some of the worst afflictions to which our fallen humanity is subjected.

Of the prevailing classes of disease, there is nothing that is specially interesting to mention. Fevers are more commonly met with in the dry season, and abdominal complaints in the wet. Excepting a few cases of asthma and catarrh, pulmonary affections are rather rare. Diseases of the liver and spleen are more frequent. One case of well defined enlargement of the pancreas has come under my observation. The symptoms seemed to be very analogous to those of chronic dyspepsia, and obstructions in the transverse portion of the colon. The organ could be felt distinctly throughout the entire length. It had an

indurated feeling, and pressure communicated soreness to the patient. I imagined that it was about four times its ordinary size. There were also evidences of an accumulation of fluid in the abdominal cavity. As the man came to see me but twice, taking on each occasion some laxative pills with him, the result of the case is not known. He lives at a distance in the jungle. An exceedingly painful disease of the stomach, which I have regarded as "*Gastralgia*," is very common among the inhabitants of this country. In a large number of cases, it baffles all the efforts of the Burmese practitioners to remove it, and when once it becomes chronic, it eventuates in a lingering train of dyspeptic symptoms with general emaciation and debility. The primary cause of it, is doubtless attributable to the kind of condiments which they use with their food. These are mostly sour fruits and sour vegetables, rendered pungent and stimulating by the addition of capsicum, onions, garlic, &c., which provoke acidity, and lead to local irritation in the submucous tissue. Moreover the Burmese are a nation of "*smokers*." All smoke, from first to last, from oldest to youngest of them, and as soon as they are capable of being inducted into the fashion, children begin to chew betel—a compound, composed of slaked lime, catechu, tobacco, areca-nut, and the leaf of the betel vine, portions of each being put into the mouth at the same time, and all chewed together. It imparts a very beautiful vermilion tint (consequent on the reaction between the alkali and vegetable) to the mouth and lips. These habits of smoking and chewing in persons so young, conduce to deprive the stomach of a large quantity of saliva that is necessary to healthy digestion, and aided by their peculiar diet, must sooner or later develope the very trying gastralgic complaint called by the people "*Yeen-liat-na*," which might be looked upon, as a "*national* disease" among the Burmans. I have treated it as all my medical brethren would, and pretty generally with success, by antacids, laxatives, local depletion and counter-irritants, forbidding the use of any article that would be likely to interfere with the treatment, or prolong the affection.

In the surgical department the cases have been far more numerous, than those that are strictly medical, of those who have sought assistance at the dispensary. They are not only greater in numbers, but more various and interesting in character. To pre-

sent you with a bird's eye view of this division of practice, I will just give the names of the most common diseases of this class, that come seeking help. The eye has the greatest variety, viz.: Granular lids; simple conjunctivitis; opacity of the cornea in its different forms of nebula, leucoma, oblonga and staphyloma both of the cornea and sclerotic membranes, spherical and conical in shape; ectropium, pterygium, iritis, ulceration of cornea, capsular and lenticular cataract, amaurosis, and two or three kinds of ophthalmia, &c. Of other parts, the register kept exhibits cancer, internal hernia, stricture of the urethra, calculi in bladder, ulcers of different grades, simple and compound fractures, luxatio, subluxatio, primary and consecutive syphilis, gonorrhœa, hydarthrus, otalgia, periostitis, necrosis, deafness, incised wounds, abscess, &c. Most of these cases are of a very difficult and complicated nature, and a majority of them are of many years standing. The Burmese doctors here in vain tried to relieve them; and as a last resource some of them have come hundreds of miles to see and consult the "white doctor from a foreign county." The confidence they manifest towards me is at once remarkable and encouraging. But there is one serious drawback in the management of their cases, and that is, the reluctance they invariably evince to the performance of operations. They have a terrible dread of the knife, and on no account will they submit to be cut, unless you pledge them success. As this cannot be done for various reasons, the opportunities for using the knife are very limited. In this country, too, justice is a mere symbol, for in the event of a prosecution, however unreasonable it may be in a civilized community, the object is to fleece the foreigner. As an instance of it, the following facts will show. A few days ago, two or three European gentlemen went out in the morning for a ride. Two of them reside here as merchants. The third was a stranger, belonging to the Bengal Pilot service, who left his station for the benefit of the voyage to sea. In proceeding slowly along the road, a Burmese woman ran up against his poney, (notwithstanding his efforts to get out of her way), and fell down. The rider instantly stopped and dismounted to ascertain whether the woman was hurt. As there appeared to be little the matter, he said at once, as she was poor, that he

would give her a present of twenty rupees, about ten dollars. The woman seemed surprised and glad at her good fortune, and quite satisfied. Soon, however, a crowd gathered round, persuaded her to sit in a blanket, and that they would take her to the deputy governor to make her complaint, when she would get plenty of money out of the "*white foreigner.*" The case was heard. The English gentleman was floored. The deputy governor decreed that he should pay one hundred and ten rupees, or go into the stocks. He urged that a medical man should be requested to examine the extent of injury, if any had been received, and he would pay any amount. But no, the money must be paid, or he should be sent to jail, and placed in the stocks. To prevent his being so degraded, the gentleman paid the money. The woman got ten, the governor and his officers pocketed the remainder. Such is heathen justice. It speaks for itself. The maxim inculcated on us all in the Bible, "to be wise as a serpent and harmless as a dove," is not more necessary to be followed in any part of the wide world, than it is in this benighted land.

In regard to your inquiry, touching the existence of scarlatina in India, based on the assertion of Dr. Gregory, that it has never been seen, I am sorry that I should have to differ in my opinion from so distinguished an authority. But this is the more excusable from the fact that the Professor was never in the East, and had to depend wholly on the statement of others in the preparation of his work on the practice of medicine. A few cases given in detail would be, of course, conclusive evidence of its being noticed, but not having these to offer at present, I am constrained to withhold all conjecture till it is my power to furnish them. If I mistake not, the disease has been met with in southern India. In Maulmein, the principal city of the British Provinces in Burmah, it has occurred in several instances, among the children of Missionaries at that station. Hereafter I shall feel awake to this subject, and advise you of any cases which may come under my observation.

Since opening the "*Dispensary*" at this station on the 1st of June last, I have kept, not a nominal, but a numerical list of the actual number of applicants daily for relief. The lists are written separately for each month; and for the five months which have

elapsed, they show an aggregate of six thousand, one hundred and thirty-four persons, whose cases have received attention, and more or less medicine. Of this number, the same individual may have appeared several different times. This arrangement I dislike, because it is not a clear exponent of the real number of cases that have been under treatment. But in a country like Burmah it is unavoidable, where to write down men's names would excite suspicion that there was some ulterior political object in view. The notes of several interesting cases are before me, some anomalous, others characteristic and well marked, but I regret that I have not now the time to copy them for transmission.

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*Report of Cases, in continuation of the Remarks on Epithelial Tumors and Cancer of the Skin.** By J. Da Costa, M. D., of Philadelphia.

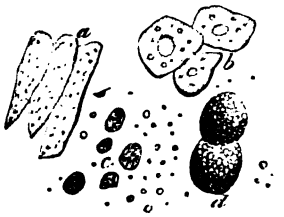
Case I. J. H——, æt. 24, a strong, healthy man, presented himself at the clinic of the Jefferson Medical College, Oct. 5th, 1850, with a tumor on the lower lip, which had been growing for three years. He stated that it commenced as a wart, and that its subsequent increase had never occasioned much pain. Dr. Pancoast removed the whole diseased mass by a V shaped incision; the wound healed kindly, and the patient has remained well ever since.

The tumor, when removed, presented a rough appearance; on its exterior were several red crusts, the interior was hard and nodulated; the mucous membrane lining its internal surface was thickened.

*Microscopical Examination.*—On submitting the crusts on the exterior to the microscope, they were found to consist of dried up epithelial cells, and blood globules. The cells were dark and non-nucleated; (Fig. 3 *a*), acetic acid did not change them.

* The nine cases here selected, were those that seemed to me the most interesting of the 34 cases I spoke of in my previous paper. For the greater part of the specimens, as well as for some particulars about the history of these cases, I am indebted to Drs. Mütter and Pancoast.

Fig. 3




*a*. Old epithelial cells from the surface of the tumor, magnified 200 diam.
*b*. Cells from the interior of the tumor.
*c*. Globular cells.
*d*. Compound granular cells.

A section from the interior of the tumor, made with a Valentin's knife, showed epithelial cells, fibrous cysts, and globular cells. The epithelial cells here were in masses, and not very large; (Fig 3 *b*) their nuclei, however, were distinct; some had nucleoli. The fibrous cysts were, like those represented in Fig. 2, (in the preceding number of the Medical Examiner,) very irregular, and delicate; some were empty, some enclosed epithelial cells. The globular cells, (Fig. 3 *c*) were about 1-4200th part of an English inch in diameter, and mostly non-nucleated. In some of the softer parts of the tumor were seen masses of granules, and very large granular cells, (*d*) with a distinct cell wall.

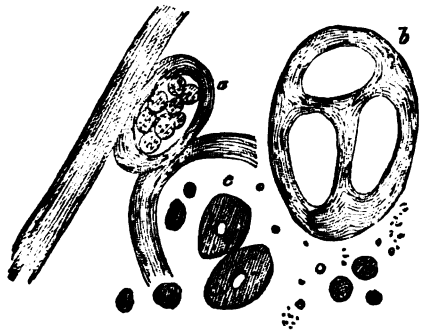
Case II. Mr. B——, a seafaring man, æt. 43, who had always enjoyed very good health, consulted Dr. Pancoast, February 3d, 1851, for a tumor of the lower lip, that had been coming gradually for two years. He had been much addicted to smoking short pipes. The tumor was removed, February 6th, by the usual incision, and the parts brought together by the twisted suture. The wound healed well, but as the edges subsequently thickened, Dr. Pancoast removed the cicatrix as a matter of precaution. The patient, when last seen, was perfectly cured.

The tumor was small, but, as in the preceding case, rough on the surface and very hard; it had not begun to ulcerate, nor had any red crusts formed as yet on its exterior.

*Microscopical Examination.*—The tumor, examined under the microscope, consisted mainly of epithelial cells, globular cells, and fibrous tissue. The epithelial and globular cells were like

those represented (Fig. 3, *b* and *c*); they presented nothing peculiar. The fibrous tissue, however, which existed in great abundance and formed the larger part of the tumor, was remarkably strong: In many places it united to form cysts, most of which were oval. These cysts were formed of very delicate fibres, and contained mostly globular cells. (Fig. 4, *a*.) Some by the interlacing of the fibres, formed in their interior several smaller cysts; (Fig. 4, *b*); in some again the cysts had opened (*c*) and discharged their contents.

Fig. 4.




*a*. Cyst from the interior of the tumor filled with globular cells, magnified 220 diam.

*b*. Oval cyst enclosing three smaller ones.

*c*. Cyst with ruptured wall, and contents discharged.

Case III. H. S——, æt. 52, a robust healthy looking man, had his lower lip parched by the heat of the sun, whilst wheeling wood on the wharf last August. The lip soon became swollen, and a small tumor formed, which gradually enlarged. It did not give rise to much pain, except during sudden changes of temperature. He applied, December 13th, 1851, to the clinic of the Jefferson Medical College, when the whole morbid substance was removed by Dr. Mütter, by a quadrangular incision, and a plastic operation performed to fill up the gap. Previous to the operation there had been some tumefaction of the cervical glands, but this speedily subsided. The wound had united throughout by the 17th of December. March 25th, I saw the patient, and he was in perfect health.

The tumor was about the size of a cherry, and had begun to ulcerate; its exterior was tuberculated; towards the right side was a dark red crust; towards the left, separate from the mass of the tumor, a little hard spot; on the internal surface of the lip there was a circumscribed rough projection.

*Microscopical Examination.*—The crust was composed of dark, long epithelial cells, resembling those in Fig. 3, and mostly without nuclei. Its red color was evidently owing to blood globules, as no blood vessels were perceptible. In a section below this crust, I found epithelial cells, so closely arranged as to resemble fibrous tissue, (see Fig. 2, in preceding number of Examiner), and only discernible by the addition of acetic acid. On placing a portion from the middle of the tumor under the microscope, I found large, distinctly nucleated epithelial cells, free nuclei, and globular cells. In another part, there were a great many free nuclei and granules. The cells in all parts of the tumor, were held together by a very delicate fibrous arrangement, which formed but few cysts. The small, dark, tuberculated spots consisted entirely of granules and globular cells; the separated hard mass contained epithelial cells, fibrous tissue, and granules. The rough circumscribed eminence on the inside of the lip, presented enlarged papillæ, also a few epithelial cells and granular matter.

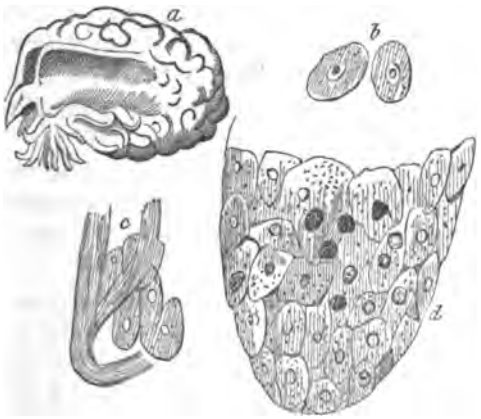
Case IV. E. J.——, æt. 80, came to the clinic of the Jefferson Medical College, November 12th, 1851, with a large tumor on the lower lip, which had been forming for two years. It gave him no pain, but occasioned great inconvenience in swallowing, especially during the last two months of its growth. He had been in the habit of constantly smoking short pipes. The tumor was removed by Dr. Mütter November 15th. December 1st, the wound had united throughout by the first intention. He left the city December 10th, when last heard of, the disease had not returned.

The tumor, when removed presented very much the appearance of a ripe mulberry; it was about an inch in thickness and occupied the whole lower lip. On its surface, as in the cases previously noticed, were several dried crusts. On dividing it, I found a great many enlarged papillæ, visible even to the naked eye. At Fig. 5, *a*, I have represented the appearance of one half of the tumor cut in this way. The inside

of the lip was smooth in some parts, but roughened in others, by projections of these papillæ.

*Microscopical Examination.*—The exterior crusty part was formed, in this instance also, of dark epithelial cells and blood-globules. The convolutions, which gave to the tumor a mulberry appearance, consisted of epithelial cells held together by fibrous tissue. A section from the middle of the tumor, showed large epithelial and globular cells. Some of these epithelial cells were round, (Fig. 5, *b*) with large nuclei, even nucleoli, and resembled cancer cells very much, for which, if seen alone, they might readily be taken.

Fig. 5,




*a.* Interior of the tumor showing enlarged papillæ, natural size.
*b.* Round cells with nuclei and nucleoli; magnified 220 diameters.
*c.* Fibrous bands enclosing cells.
*d.* A papilla, treated with acetic acid; magnified 200 diameters.

The softer parts of the tumor were composed of globular cells and granules; the harder portions were made up of fibrous tissue and of cysts, filled with globular cells. The interior of the lip, which as I have said before, was much roughened, showed fibrous bands loosely enclosing epithelial cells. (Fig. 5, *c.*) These fibres supported the cells, and would, if condensed by pressure, have formed cysts around them. The papillæ found in the central part of the tumor were very distinct. I succeeded in placing an entire one under the field of the microscope, and

was very much struck with its apparent fibrous structure; it was only after allowing acetic acid to act on it for some time, that I found it to consist (Fig. 5, *d*) of flattened epithelial cells, with a few globular cells and free nuclei.

*Measurement of Cells found in this Tumor.*

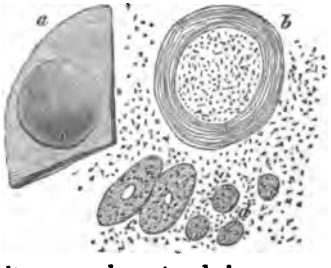
| | |
|---|---|
| Epithelial cells from the middle of tumor | Cell 1-1000th, nucleus 1-5000th part of an inch in diam. |
| Round cells with nucleus and nucleolus | Cell 1-1200th, nucleus 1-3950th, nucleolus 17900th. |
| Globular cells . . . . . | Cell 1-4800th and 1-3750th. |
| Epithelial cells on papillæ . . . | Cell 1-1300th, n. 1-5200th. |

Case V. Mr. W. æt. 83, consulted Dr. Pancoast, Dec. 21st, 1850, for a tumor on his right cheek. Six months previously, he first noticed a little red pimple, which gave rise to intense itching. He scratched it continually; and the consequence was that it became inflamed and grew very rapidly. Dr. Pancoast removed the tumor Dec. 29th; the wound healed well, so as to leave scarcely a visible cicatrix, and the patient has had no return of the disease.

The tumor (Fig. 6 *a*) was about the size of a dime, red, vascular, and elevated above the surrounding tissue; its interior was softened and contained a juice very much like that seen in encephaloid cancer.

*Microscopical Examination.*—Under the microscope, the red vascular surface was found to consist of epithelial cells, granules, and blood globules. In a layer beneath were many globular cells, and cysts, mostly filled with granules. A deeper section

Fig. 6.




*a*. The tumor after its removal; natural size.
*b*. Cysts filled with granules; magnified 220 diameters.
*c*. Small dark epithelial cells from the softened part of the tumor.
*d*. Large globular cells.

showed distinctly nucleated epithelial cells, like those seen Fig. 4 *b*, and a great many large granules, which are always present in tumors of the face. The juice in the interior of the tumor consisted mainly of dark epithelial cells (Fig 6 *b*), and very large globular cells (*d*), measuring more than the 1-4000th part of an inch, and larger than I have yet seen them in any tumor.

Case VI. Miss H. G——, æt. 22, was operated on by Dr. Mütter, Nov. 19th, for the removal of a cupped tumor from the chin, about the size of quarter of a dollar. The tumor first attracted attention thus: About ten weeks before the operation, the patient, whilst sitting in church, was annoyed by intense itching at the incisive fossa, which was aggravated by rubbing. Upon coming home, she noticed the skin in the fossa above the chin to be dry and covered with scales like those of pityriasis. Her pride prompted her to cover the spot with court plaster, which served to increase the irritation, without in any degree alleviating the itching. After a few days the skin became broken, and the itching was supplanted by a deep smarting pain. Irritating ointments and washes were unremittingly applied, and changed by the successive advice of a number of physicians, quacks, and old women, until the itching spot became an open sore, with hard elevated edges, enclosing an area of flabby granulations, from which a thin fluid was discharged, occasionally intermingled with pus. It is well to remark that the patient has always been very scrofulous, had then enlargement of the glands under the chin, and a spot in the axilla resembling the one described in its first stage; it had, however, not been subjected to irritating ointments and washes. The operation consisted in taking out the whole of the tumor from the chin by a circular incision, and then bringing the sides of the wound together by means of harelip pins: the incision healed well and almost throughout by the first intention.

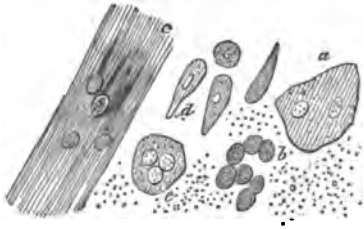
Dec. 16th, Dr. Mütter took out of her lip again a little hard tumor, which had formed since the first operation. Since this period no return has taken place; the enlarged glands under the chin and in the axilla, have, as far as I could learn, disappeared.

The first tumor was, as before observed, surrounded with

a hard distinct ring; the interior was red and granulated; the tissue around its base was red, sensitive, and presented numerous minute vessels ramifying beneath the cuticle. The second tumor was hard and about the size of a pea.

*Microscopical Examination.*—A piece from the exterior of one of the granulations of the tumor on the chin, contained epithelial cells with large double nuclei (Fig 7 *a*), some with nucleoli. These nuclei measured the 1-3500th of an inch in diameter, and were very distinct. Besides these cells I found great masses of globular cells (*b*), which were dark and indistinctly nucleated. The hard ring around the tumor consisted of fibrous tissue, with free nuclei and globular cells infiltrated into it. (Fig. 7, *c.*) In the tissue next to the hard ring, I found pale, non-granulated, fibro-plastic cells (*d*) and globules, also (*e*) a small fibro-plastic mother-cell. These fibro-plastic cells resembled cancer cells very much; they were, however, more indistinct, and had fainter outlines than cancer cells usually have. The tumor taken from

Fig. 7.



*a.* Large cell with double nucleus, magnified 220 diameters.

*b.* Dark globular cells.

*c.* Fibrous tissue with cells infiltrated into it; from the ring surrounding the tumor.

*d.* Fibro-plastic cells.

*e.* A fibro-plastic mother-cell.

the lip was composed of small but distinct epithelial cells, of globular cells, and of pale cells, which I took to be fibro-plastic.

This tumor was very interesting in many respects. Firstly, from the rapidity of its growth; secondly, from being accompanied with enlargement of the glands; thirdly, from its apparent return; and fourthly, from its partially obscure micro-

scopical character, some of the elements of which (Fig. 7, *e*) might with a little more distinctness, have caused it to be regarded as a cancerous tumor. It was, however, not cancerous. The rapidity of its growth was caused by the irritants applied. Its return was purely local; very probably a few cells had been infiltrated into the tissue of the lip, before the tumor of the chin was removed. The enlargement of the glands was not owing to the presence of the tumor, but more to the scrofulous constitution of the patient; the cells, too, were in their character more like those appertaining to a benign tumor.

Case VI. H. P——, æt. 73, a shoemaker by trade, came, Oct. 12th, 1850, to the Clinic of the Jefferson Medical College, with an apparently carcinomatous tumor near the region of the umbilicus. He had, to use his own words, never known a day's sickness. Seven or eight years before, he noticed a small tumor forming on the part against which he had been in the habit of wearing his board, whilst working. It gave him no pain but produced a continued itching, which he relieved by scratching. A year before its removal it began to ulcerate, and was very troublesome to him, especially whilst working. It was taken out, Oct. 13th, by Dr. Pancoast. Up to Dec. 12th, 1851, the patient remained well; the disease had not returned.

*Microscopical Examination.*—The external surface of the tumor was composed of small dark epithelial cells. Beneath this were large masses of straight white fibrous tissue, with transverse fibres crossing it; a great many pale fibro-plastic cells, like those Fig. 7, *d*; and in some parts epithelial cells and globular cells. The epithelial cells formed in the centre of the tumor were like those on the surface (Fig. 6, *c*), dark and with small nuclei; many of them were not nucleated at all. The tumor was a mixture of a fibro-plastic and epithelial tumor, and was interesting from the fact, that it was evidently caused by direct pressure.

Case VIII. Mr. E——, æt. 62, a robust healthy man, noticed, 23 years ago, a little white spot in the middle of the tongue, which produced continually a sense of roughness, and gave rise to great inconvenience in swallowing, but not to any constant

pain. This spot gradually enlarged and several others formed in neighboring portions of the tongue. He applied for advice to a great many physicians, who cauterized the part, but did not prevent the disease from extending. A year ago he became the patient of Dr. Mütter, who cut out the little white lumps several times. This treatment proved very successful: the small white spots have totally disappeared, and he swallows with ease, which formerly he could only effect with great difficulty.

The part, when removed, consisted of a whitish, creamlike looking substance, sticky to the touch and of a crumbling nature. The top had a crusty appearance, darker than the centre, and elevated above the surrounding substance of the tongue.

*Microscopical Examination.*—I have at different times examined the whitish substance removed, and always found the same elements. The top consisted of dried-up epithelial cells, (Fig. 3, *a*); beneath that, epithelial cells with large nuclei, (Fig. 3, *b*); granules and globular cells. On one occasion I observed cells infiltrated into the muscular fibre of the tongue; and this is the probable cause of the apparent return of the disease after the removal of some of the parts; which return, however, was always entirely local.

As a well-marked case of a cancerous tumor, I have selected the following:

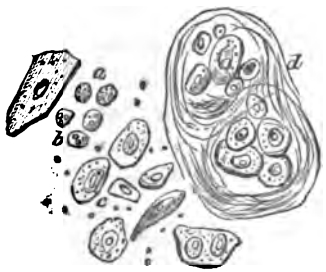
Case IX. T. V——, æt. 53, a pale, sickly-looking man, was operated on at the Clinic of the Jefferson Medical College, on the 1st of February, 1851, for a cancer of the lip, which had been coming for four months, and was attended with sharp lancinating pains. A lymphatic gland of the lower border of the jaw was found slightly enlarged, but the patient refused to have this taken out. On the 19th of March, as he thought the gland was growing very rapidly, he appeared willing for a second operation. At this time there was a tumor under the chin, formed by several enlarged glands, and connected with the submaxillary, which itself was hard and about the size of a walnut. A semilunar incision was made by Dr. Pancoast, over the tumor, and the parts opened. The disease proved as extensive as was anticipated. The sublingual and adjoining lymphatic glands, as

well as the sub-maxillary, were found involved, and were accordingly removed. The incision healed well, but seven weeks after the cicatrix opened, and a reddish fungous mass came from the seat of the wound. This mass grew rapidly, and attained the size of a fist; the discharge that came from it was very offensive. A lump also formed behind his ear and one on his neck; both grew quickly, were attended with lancinating pain, and opened three weeks after their first appearance. The patient was very much emaciated, but bore his sufferings with fortitude. A week before his death, he undertook a journey to a quack in New Jersey, who applied very energetic caustics to the parts affected, and caused them to inflame violently; a circumstance which no doubt hastened the fatal termination. He died Dec. 21st, 1851; the tumor on the neck was found to have extended below the clavicle.

The tumor on the lip was not very large; it had begun to ulcerate on the surface; the submaxillary gland taken out in the second operation, was hardened, but presented no other morbid appearance to the naked eye.

*Microscopical Examination.*—The exterior of the tumor of the lip was composed, as in epithelial tumors of the lip, of epithelial cells; in the part that had begun to ulcerate, there were pus cells (Fig. 8, *a* and *b*), and a few small cancer cells. The central part consisted of granules, compound granular cells, and of many cancer cells with large nuclei. The internal surface of the tu-

Fig. 8.




*a*. Pus cells magnified 220 diameters.
*b*. Pus cells treated with acetic acid.
*c*. Cancer cells from the interior of the tumor.
*d*. Cancer cells in loose cysts, from the submaxillary glands.

mor contained fibrous tissue and cysts, filled with cancerous matter. In some sections I found the muscular fibre, entering into the composition of the lip, infiltrated with cancer cells, but yet preserving its natural appearance; in others it was completely altered in structure,—a change which I have frequently noticed in cancerous tumors. A section from the submaxillary gland proved this, too, to be cancerous. It contained many cancer cells and granules, like those in the tumor of the lip. In some parts were strong fibrous tissue; in others, again, a very delicate fibrous tissue forming loose cysts filled with cancerous matter. (Fig. 8, *d*). The small glands, too, connected with the submaxillary, were cavernous and showed under the microscope the same elements.

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## PHILADELPHIA COUNTY MEDICAL SOCIETY.

*Extra Meeting, April 13th* 1852.

### DISCUSSION ON ANÆSTHESIA.

Continued.

(Reported for the Medical Examiner.)

Dr. Parrish requested that Dr. Patterson would give to the Society the result of his observation on the use of anæsthetics in Europe, he having lately returned from a visit to that country.

Dr. H. S. Patterson said that he should have much preferred to hear a continuation of the discussion of the previous meeting by the gentlemen who so ably participated in it. He was unfortunately not present at that meeting, but he had read the report of its proceedings with much interest and instruction. But, being thus publicly challenged by Dr. Parrish to speak on the subject, he felt it his duty to contribute his mite to the discussion. He had until recently felt, as the great body of the profession in Philadelphia feel, in regard to the anæsthetics. His position had been that of doubt, of distrust, and avoidance of them as a dangerous innovation. These agents came to us in a very questionable shape originally. When the first report of anæsthesia in surgery reached us from Boston, it came, not only startling us by its novelty and the magnitude of the change in practice it contemplated, but also shocking us by its violation of our ethical notions and the savor of empiricism that hung about it. The new agent had a new, high-sounding and unscientific name, and there were rumors of a patent-right to be secured to its dis-

coverers. But when it was shown to be plain sulphuric ether, which any chemist could manufacture and any practitioner administer—when the name of Letheon disappeared, and the letters-patent were no longer heard of—especially when indisputable evidence of its power and utility reached us, we should have given the subject a more favorable reception and examination than we have done. But the mass of resistance to the use of anæsthetics has been more obstinate and impregnable here than any where else in Christendom; and our hospital—alone among great hospitals—has never permitted their employment even in the most painful operations. Participating in these feelings, and never having administered either chloroform or ether in his practice, Dr. P. visited Europe during the past summer, and one of the objects he proposed to himself was to obtain, if possible, more light upon this much mooted question.

In Edinburgh he had the opportunity of seeing and hearing a great deal of the use of chloroform, and it was in regard to the experience of that city that he desired mainly to speak. The undeniable and most important fact is, that in Edinburgh, where chloroform has been used with a degree of freedom, and with a frequency and extent elsewhere unknown, not a single unpleasant circumstance has attended its administration. Every obstetrician, surgeon and dentist in that capital uses it, without exception. Every teacher of obstetrics advises its employment, and gives it to his patients in labor, some in all cases and others only in cases of unusual duration and severity. No surgeon thinks of performing a serious or painful operation, one likely to be attended with great suffering or severe shock, without bringing his patient under its influence. Thousands of patients have inhaled it to full anæsthesia; the chemists manufacture and sell it daily in large quantities; and no one has been injured or even made ill by it. There does not remain a practitioner in Edinburgh opposed to its use. An infinite amount of pain has been relieved, great suffering has been prevented, the dread of operation has been in a great measure removed, and no harm has been done to a single individual. There is no denying these facts. There can be no supposition of concealment or unfair dealing. The character of the gentlemen in whose hands its employment is, of itself precludes the idea as one not to be

entertained for a moment. In a large proportion of the cases, if not in all, concealment would be impossible were it attempted. Dr. Simpson introduced the chloroform to our notice as a therapeutic agent, and he bears the unqualified testimony that he has never seen it do any mischief whatever to his patients. Dr. S. is a man whose word, in a matter of medical experience, must be taken without qualification. He has not only the candor of an honest man, but also the discriminating judgment which is not readily deceived, and the calm deliberateness which is not easily led away by the enthusiasm of a hobby. By his kindness Dr. P. was enabled to witness the administration of chloroform to several patients, and to converse with others who had used it in child-birth, some for a considerable length of time. In some cases Dr. P. has maintained its effects for several hours. This powerful agent was always administered with due caution, but with a fearless hand. The patient was thrown into a condition of perfect insensibility, and underwent operations otherwise painful, without any apparent sensation, and certainly with no subsequent recollection of suffering. The manner of Dr. S. indicates the most entire confidence in both the safety and utility of his practice. The lying-in women whom Dr. S. saw were all in excellent health and spirits, and Dr. P. thought that their average "getting up" was shorter and better after chloroform than without it. All asserted that they awoke from the slumber without the slighest after-sensation or recollection of pain, without head-ache or vertigo or nausea, and precisely as after a refreshing sleep. One spirited and intelligent lady, with whom Dr. P. had the honor to converse, roundly asserted that the ladies of Edinburgh *would* have chloroform whether their doctors gave it to them or not; that she would not approach her confinement without it, and that the knowledge that this invaluable boon was within her reach, had taken away all the trembling apprehension which had previously made her pregnancy a period of dread and suffering.

In other parts of Great Britain and on the continent, the anæsthetics are not used so freely as in Edinburgh, but still they are resorted to in all severe surgical operations, and very frequently in obstetric practice. There are very few who use them in every case of midwifery to which they are called, but there are still fewer who do not use them in some cases. No sur-

geon of any note refuses their employment altogether. They are used in every hospital of London and Paris, more or less. Dr. P. was amused by the ardor of a gentlemen connected with St. Bartholomew's, who, in a conversation on the subject, enthusiastically declared that all the other benefits conferred on mankind by the discovery of America, (bark and our democratic liberty included,) were eclipsed by the inestimable addition of anæsthetics to the treasury of the healing art.

The substance used exclusively in Edinburgh, and most generally elsewhere, is chloroform. The accounts we have of unpleasant or fatal effects from it, do not deter them from administering it. Dr. P. saw no sulphuric ether given, and met with no physician who employed it. The objections to its use are its highly stimulating qualities, (increasing the risk of fever and hemorrhage,) its unpleasant and exceedingly persistent odor, and its liability to leave a disturbed condition of stomach with gastric uneasiness and acid eructations. The question of danger from chloroform he would not discuss at present, except to express his conviction that it is ascribable, in all cases, to some error in the method of administration or in the management of the patient or of the inhaling apparatus. Dr. Simpson gives it on a napkin or handkerchief, lightly folded in a funnel shape and held near the mouth. In obstetrical cases he gives it on the approach of each pain, removing the napkin the moment the relaxation of the patient's muscles shows that the pain is passing off, and not reapplying it until her uneasy motions indicate the approach of another pain and that it is beginning to be felt.

In view of all these circumstances, Dr. P. enquired whether there is not reason to believe that we in Philadelphia have been a little unreasonable in our opposition to these agents. Certain it is, that they alleviate much suffering for which we have hitherto had no remedy, and that they have in a measure taken away the curse of child-birth, and deprived surgical operations of much of their horror.

Dr. Condie was inclined to believe, that a very considerable change, in the opinion of European practitioners as to the employment of anæsthetics, had recently taken place. That a much

greater degree of caution in their administration was now inculcated, and that the circumstances under which a resort to them solely to prevent pain, is proper, are admitted to be much more restricted than was the case upon their first introduction. This he inferred, from the very different tone assumed, of late, by the medical journals of Europe when treating of anæsthetics and of the cases in which their administration is justifiable. Much of the wild enthusiasm by which the propriety of a resort to them, in almost every case attended with pain or suffering, was insisted upon by their early advocates, has disappeared. It is now admitted, on all hands, that the leading anæsthetic (chloroform) is an active poison, and that to prevent disastrous consequences following its administration, the utmost caution must be observed; that we are not always able to determine the effects that may be produced, in different individuals, by the inhalation of the same quantity of the article; that the induction of anæsthesia is not justifiable in trifling operations, or in ordinary cases of perfectly natural labor; that, even in those cases in which anæsthesia is considered proper during parturition, it is unnecessary to push it to the extent of inducing an entire abolition of consciousness; and finally, that there are a number of circumstances the presence of which forbids absolutely, in all cases, a resort to it.

Anæsthetics have been in use for too short a period to enable us to arrive at any very certain conclusions in regard to their real value as therapeutic agents—to determine accurately all the cases and circumstances to which they are adapted, or to lay down the proper rules for their safe administration. It unfortunately happens that, whenever any important remedy is announced, instead of a dispassionate examination of its properties, and a cautious testing of its curative powers, it is at once seized upon by a set of enthusiasts, who laud it far beyond its deserts, and ascribe to it remedial virtues under circumstances where it is afterwards ascertained to be powerless for good, if its effects be not even positively injurious; and if the agent be one of great activity, it is only after the infliction of much injury from its injudicious employment, that it attains its proper place upon the lists of the materia medica. When iodine was introduced as a remedy—to believe those who first described its properties

and therapeutic powers—it was to remove, at once, consumption from the list of incurable diseases, and to arrest all scrofulous affections, with as much certainty as the bark or quinine is known to arrest the paroxysms of intermittent fever.

But, in reference to no remedial agent, has this wild enthusiasm been displayed to as great an extent perhaps, as it has in regard to anæsthetics. By their agency pain was to be expunged from the catalogue of human evils—child-bearing was to be divested of its agony, and the knife of the surgeon was to remove the diseased member from the body without the patient suffering a single pang, and this without the slightest danger or inconvenience either immediate or remote.

No wonder need be experienced that anæsthesia should have secured from the very first so many ardent advocates, that it should have been recklessly resorted to in almost every operation, in every case of labor, and in almost every disease attended with pain or acute suffering of any kind. Nor has, as yet, the occurrence of death after death, directly attributable to the influence of the agents employed in its production, been a sufficient warning to deter all from a resort to these, merely for the prevention or relief of pain.

By the physician, pain is to be studied with very different feeling from those prompted by a morbid sensibility. Its removal may not, under all circumstances, be advisable. Though invariably an evil, still, cases may certainly occur, in which it would be better to allow the patient to endure, for a short period, even severe suffering, than to induce in him a state of complete insensibility. It was the opinion of Dr. Physick, that, generally speaking, important operations are more successful in those patients who give full vent to their feelings, than in those, who, by a powerful effort of the will, suppress all indications of suffering. And there is some foundation for the enquiry whether, even admitting that, by the employment of anæsthetics, surgical operations may be divested of pain without any immediate danger to the life of the patient, the ultimate result of such operations is as favorable, upon the whole, as of those in which anæsthesia has not been induced.

A comparison that has lately been made by an acute and accurate observer, in our midst—based on the statistics of several

large hospitals—of the results of operations in the same institution, before and after the introduction of anæsthetics, as well as the results of operations performed in those hospitals where anæsthetics are now invariably employed, with that of the same class of operations performed in the Pennsylvania Hospital, without the induction of anæsthesia, would lead us to suspect that the abolition of pain by anæsthetic agents does actually exert an unfavorable influence upon the result of operations; an opinion at which Dr. Porter of the U. S. army had arrived from his experience of the use of these agents, during the war with Mexico.

In obstetrics, Dr. Ramsbotham, in the last edition of his *Obstetric Medicine and Surgery*, has denounced the employment of anæsthetics, excepting in some few exceptional cases; while Dr. Chowne, in a late discussion before the London Medical Society, remarked, that he had seen most disastrous consequences follow the administration of chloroform—not only simple after-consequences, but serious mental disorders. The fact of the occurrence of insanity from the use of chloroform is insisted upon by Dr. Webster, who has adduced several cases in which such a result occurred; his statements are of a character that forbid our treating them with entire indifference.

But even if we could, with positive and invariable safety, prevent the pains of parturition by the employment of anæsthetics —would it always be proper to do so? There may be some practitioners of such consummate skill in the application of obstetrical instruments, who, directed solely by their knowledge of the anatomy of the pelvis, and the position of the head, can apply them, without any risk of injury to the organs of the female, as well while she is in a state of entire unconsciousness as when she is in a condition to advise him, promptly, of any pain he may inflict upon her. Dr. Condie, however, very freely confessed that he preferred always, in the application of instruments during labor, that the susceptibility of the female to painful impressions should be unimpaired, as an additional safeguard to prevent her suffering injury from maladroitness on his part.

Much surprise has been expressed by Dr. Parrish, that the comparatively few cases in which fatal effects have resulted from the employment of anæsthetics should be used as an argument

against a resort to them in surgical operations and during labor, when the same objection will equally lie against the administration of any of the more potent and useful articles of the materia medica. But is it not far more surprising that the gentleman should not see the very material difference between the employment of a dangerous remedy to *save life*, and a resort to a similar remedy *merely to destroy pain*, in a case that we have every reason to believe, so far as the safety of the patient is concerned, will do very well without it? It will not do to point to the 9000 operations safely performed at St. Bartholomew's Hospital under the influence of anæsthetics, in evidence of the propriety of resorting to it, as a mere preventive of pain—for the one single case of death acknowledged to have occurred in that institution from the use of anæsthesia, independently of others of which we have been informed, is sufficient to counterbalance all the good supposed to have resulted from it, by the mere abolition of pain, in the 9000 cases. The life of one patient in 10,000 ought not to be sacrificed to obtain for the remaining 9999, relief from what is, in fact, in most cases, a very short period of suffering.

Dr. C. remarked, that he did not wish to be considered as altogether opposed to the employment of anæsthetics as therapeutic agents. He was satisfied that their introduction had armed us with a most potent and valuable means of relief in a numerous class of cases. From their internal use, by inhalation, as well as from their application externally, he has derived the most beneficial results in many instances: he has seen them arrest, immediately, the most violent paroxysms of puerperal convulsions, allay promptly the intense suffering induced by cramp of the stomach and intestines, and that attendant upon neuralgic affections of the internal organs, and of various portions of the surface. He could even conceive of operations in which the risk of danger from their employment, should not deter us from availing ourselves of their pain-abolishing effects. An operation may be necessary to save life, but one, at the same time, attended with so much and so long continued suffering, as to cause the patient to hesitate between its endurance and the *certainty of death* should it be omitted or delayed. In such a case, Dr. C. would not hesitate to recommend the induction of anæsthesia—believing that the risk the patient will incur from it will be fully compensated by its enabling him to undergo an operation, the pain of which it

would, otherwise, be scarcely worth enduring to purchase the few additional years of existence it may possibly bestow. Cases too occur, not necessarily fatal, of violent paroxysms of pain, occurring periodically, at shorter or longer intervals, and during a very long period of time, where relief from suffering, by which life is rendered a burden, is cheaply purchased by any remedy, even one, the exhibition of which may be attended with considerable danger. Such cases are, unquestionably, proper ones for the employment of anæsthetics; under many other circumstances also, they will no doubt be found useful and judicious remedies—even although no other good effect should attend their exhibition than the relief of pain.

Dr. Parrish remarked that he was surprised to find the statistics of Hospitals introduced here as opposed to anæsthesia in large surgical operations. The basis of the calculation, as I understand it, is a comparison between the results of amputations in the hospitals of New York and Boston, since the introduction of anæsthetic agents into these institutions, and those of the Pennsylvania Hospital, where they are not used. Dr. Condie, who generally speaks with such accuracy, on questions when facts are concerned, has not brought forward the figures by which he claims to sustain his position, but has made a general statement that a comparison between these institutions is altogether unfavorable to the use of anæsthetics.

Now, will any one undertake to say that a slight difference in the percentage of mortality, after operations of any given class, running through a period of only a few years, and without taking into account all the attending circumstances, the comparison being made between three institutions, and those not of the largest class, is to be taken as evidence against the use of an article, which has been employed thousands of times in the largest hospital establishments in the world?

Why, it is well known that the statistics of a hospital bearing upon any given point, may vary very much from year to year, and that a series of unfortunate results in one or two years will influence very materially the general results for a series of years. Thus an epidemic erysipelas may prevail, and carry off a large number of patients who have been subjected to capital operations;

and if the institution should be visited with such an epidemic for several seasons in succession, the mortality may become so heavy, as to keep it in the rear of the more favored institutions for a long series of years. There are, too, various other circumstances which may influence the mortality, entirely independent of the use of anæsthetics, and which in my judgment would render it very unsafe to draw conclusions, based upon the experience of two or three institutions during a period of a few years. I apprehend, also, that a difference will be found in the percentage of mortality after any given capital operation, during a series of years, amongst the best hospitals of this and of other countries, both before and since the introduction of anæsthetic agents, showing that other causes are constantly varying the results.

But if a difference in the mortality of hospitals prior to, and since the introduction of anæsthetic agents, is to be taken as an argument for or against them, we have a much more extended field of comparison than that offered by the three chief hospitals of this country.

The large hospitals of Europe furnish much more reliable data; and it so happens that the advocates of anæsthesia point triumphantly to the statistics of these institutions as affording ample evidence of a diminished mortality after the great capital operations, since the introduction of these pain destroying agents.

In the elaborate work of Professor Simpson, on anæsthesia in Surgery and Midwifery, the reader will find two chapters devoted to the question, whether anæsthesia increases or decreases the mortality attendant on surgical operations. The author has here collected the statistics of mortality after the large amputations, in different countries, as derived from official sources, including Phillips' tables, which comprise not only the results in hospital practice, but in the private practice of physicians in Great Britain and in other countries, so far as recorded in the periodical literature of these countries. He has also availed himself of Malgaigne's tables of results from the Parisian hospitals, forming altogether one of the most complete and extensive collections of cases yet published. The percentage of mortality after large amputations, calculated from these data, which were formed prior to the introduction of anæsthetic agents, are then compared with the results after the same operations with anæsthetics, as derived from the

British and Parisian hospitals, forming a series of upwards of 300 cases, up to the time when Professor Simpson wrote.

The conclusion arrived at is, that the mortality since the introduction of anæsthesia is sensibly diminished, and the argument in favor of anæsthetics thus derived is considered by Dr. Simpson as most cogent and convincing. I can only refer the members to this array of figures on the Ether side of the question, and ask them to compare them with those now brought forward on the other side, and see which is the stronger.

I believe myself that there is some degree of uncertainty in this method of calculation, but if it is relied on, Etherization has evidently the advantage.

In regard to the recent unfortunate death from chloroform at St. Bartholomew's hospital—it is certainly against it—though it is only one death in over nine thousand cases, in which the article has been administered there; still, this with the others which have been reported, shows that chloroform is a most potent agent, and that it should not be given on trivial occasions, and without great caution, while at the same time one death in ten thousand should not cause us to abandon it. I myself have always preferred the ether, believing it to be safe and reliable, and should not use the more powerful agent, where this answered the purpose.

Dr. Hays, stated that he was not disposed to discuss, on the present occcasion, the question of the propriety of using anæsthetic agents; but the statements made this evening by the gentleman who opened the debate, relative to the general and indiscriminate use of chloroform in Edinburgh, without a single instance of injurious effects resulting therefrom, were calculated, he conceived, to convey the very erroneous impression that no risk attended the employment of that potent agent. He felt impelled, therefore, by a sense of duty, to put in a word of caution. Nearly thirty cases in which death has been produced by the administration of chloroform have been recorded with their full details; and perhaps double that number have been casually referred to in debates before different learned bodies, but the particulars of which have never been published. Not a few cases also of death after the administration of chloroform

have occurred, in which, he believed, the result was chargeable to that agent, though ascribed to other causes. Be this, however, as it may, he thought that undoubted cases enough might be brought forward to demonstrate that the employment of chloroform was not devoid of danger.

Some of the recorded cases of death from chloroform have been ascribed to the article employed being impure; others to carelessness in its administration; and others again to some constitutional peculiarity or organic disease which should have forbid its employment; and thus it has been attempted to prove that in all these cases the fatal result might have been obviated by proper caution.

A case of death from chloroform, however, has very recently occurred which does not allow of any such loophole to escape, from the fact that danger always attends the use of chloroform. This case occurred—where of all places it should have occurred in order to teach a salutary lesson of caution—in St. Bartholomew's Hospital, London—where it had been boasted that chloroform had been used in between nine and ten thousand cases, in not one of which "has its employment left a stain on its character as an innocuous agent of good."

The subject of this case, was a young man only 23 years of age, affected with aneurism by anastomosis implicating the ear and a portion of the scalp behind it, and which had commenced when the patient was four years of age. He was admitted into St. Bartholomew's Hospital, and Mr. Lloyd determined to attempt its cure by ligating the vessels supplying it. Chloroform was given to the patient, and he was kept under its influence for half an hour, the operation having proved a tedious one. He recovered from its influence without any ill effects. The tumor was not, however, entirely obliterated. A little over a month subsequent to this operation, Mr. Lloyd found on examination an artery between the angle of the jaw and mastoid process which pulsated strongly, and on compressing it so as to arrest the circulation in it, the pulsation in the tumor entirely ceased. Mr. Lloyd determined to apply a ligature to it. Chloroform was again administered by the careful and experienced assistants of the Hospital, and the article used was from the same bottle which had been administered in the previous opera-

tion. In from five to ten minutes he came under the influence of the article, and Mr. Lloyd commenced the operation. Scarcely had he incised the skin when his assistant informed him, that the patient's pulse was sinking, and before any restoratives could be applied, he ceased to breathe. Every means that could be devised were resorted to in order to re-animate him, but without success. On post mortem examination, no morbid organic change in any organ was found to explain the fatal occurrence; but the blood appeared to have been poisoned. "It was fluid, and it remained without coagulation after its escape from the heart and vessels. It had also a brownish purple hue, much like that which is commonly observed in the spleen; none of it, when thinly spread out, presented the ordinary dark, black or crimson hue of venous blood." But for this untoward administration of chloroform, the patient might have lived to the usual term of human existence. Here, then, is a case in which no human foresight could have provided against the fatal result. The chloroform used was pure, and had been employed before without any ill effects; there was no idiosyncrasy in the patient forbiding its employment, for he had previously been under its influence with apparent impunity; that there was no want of caution and skill in its administration, we have the assurance in the fact that it was given by the experienced assistants of the Hospital; and that there was no organic disease forbiding its employment, was demonstrated by the autopsy. If this case is not calculated to prove that danger attended the administration of chloroform, Dr. Hays said he would be at a loss to know what kind of evidence gentlemen required for that purpose.

In reply to an inquiry made by Dr. Parrish, whether he (Dr. Hays) considered the case he had alluded to forbiding the use of chloroform in every case, Dr. H. stated, that were he compelled to undergo a very painful and protracted operation, he would himself take an anæsthetic, preferring to run the risk rather than endure long and severe suffering, and he would allow his patient the same option, if, after fully explaining to him the state of the case, he should desire to do likewise. But to resort to chloroform for every trifling operation, and in all cases where

the slightest and but temporary pain was to be endured, he conceived not only to be injudicious, but actually criminal.

P. S. Since these remarks were made two more cases of death from chloroform have occurred, one in Boston, the other in New Haven.

Dr. H. S. Patterson remarked that the meeting had got pretty well into the discussion of the question on its merits, when Dr. Hays brought down the St. Bartholomew's case upon us as a sudden extinguisher, and it appears that we cannot get beyond it. Around that all the discussion seemed now to centre, and it must be got rid of before any further progress could be made. He did not know that he could get rid of it, but at all events, it could be looked fairly in the face, and its real importance determined. The idea that arose in his mind while Dr. H. was speaking, was that this, like other cases of alleged death from chloroform, came with an air of mystery about it. A mischief has been done, somehow or another; life had been extinguished in some way; but the only fact now apparent is that the chloroform has done it. Let this be admitted, and it does not necessarily follow that the agent in question cannot be used at all therapeutically. The conclusion is greater than the premises will bear. The superstructure is much too large for the foundation. The fact seems to be that chloroform may be—indeed has been—inhaled in such manner as to produce death. Every article of the materia medica of any value, is toxical or at least injurious in some method of exhibition or some dose. Generally, the toxical is in the direct ratio of the therapeutic power. The potency which is curative in its judicious employment, may be deadly otherwise applied. The mere fact that a medicinal agent is capable of destroying life is no argument against its use. Is there any substance of acknowledged power in our pharmacopœia that may not do mischief? Are there not many that have been fatal to human life, not only when used criminally, but also injudiciously employed, although with the best intentions? He (Dr. P.) is not one of those who would willingly uncover the nakedness of the profession or expose its shame, but he would ask whether chloroform has destroyed more

human lives than opium, even in its medical use? He would only refer to the old treatment of *delirium tremens* by heroic doses of that drug. He had seen patients die in that disease, in the Pennsylvania Hospital and in the Alms-House, and who would say whether the condition which preceded death was coma or fatal narcotism? He had his own convictions on the subject, and they were such as to lead him to seek a mode of treatment for that affection without opium. But, admitting all this, does it prove that opium should not be used? On the contrary, opium remains an indispensable portion of our means of cure in innumerable cases. If a substance is poisonous, it is so in certain doses, in a particular mode of exhibition, and according to fixed and ascertainable laws. We can determine by observation what functions it affects, in what quantities and in what way. We do not hesitate to use poisons much more deadly than chloroform is alleged to be by its most vehement opponents, because we know their action and can regulate it to good therapeutic ends. If a patient should die of a dose of hydrocyanic acid or strychnine medicinally given, there would be no hesitation in concluding that there had been a gross error in the dose or in the manner of exhibition. Why refuse the application of the same rule to chloroform? It may be asserted that its poisonous influence is so subtle and so fatal that it cannot be regulated. But this is disproved by thousands upon thousands of cases of its successful administration. If it is poisonous at all, it is so only in a certain quantity or by a certain rapidity of introduction, which can be clearly ascertained, scientifically regulated, and securely guarded against. Let us now look, with a more thorough scrutiny into the St. Bartholomew's case, which has been thrown in our way as an impediment not to be got over. The first fact to be noticed is that this same patient, not a month previous, was kept under the full influence of chloroform for twelve minutes, during a painful operation, and without the slightest inconvenience or interruption to his recovery. There was plainly no "idiosyncrasy" here. It is proved that chloform could be administered to that very patient with safety and with the most beneficial results. On the last and fatal occasion, he inhaled the vapor of chloroform for a much shorter time, and died before the first incision was completed by the knife

of the surgeon. Now, can any man believe that the chloroform was administered in precisely the same way, in the same quantity, and to the same extent, as on the former occasion? Like causes produce like effects. The man who takes a grain of opium to-day with beneficial effects, will not be fatally poisoned by a grain of opium a month hence. The probability is that in the first instance the chloroform was properly administered with a due admixture of atmospheric air, while in the latter it was hastily presented, of full intensity and undiluted. The quantity to be estimated is not altogether that poured upon the napkin or introduced into the inhaling apparatus, but that actually received into the lungs of the patient, and absorbed from their mucous membrane. A better case for the illustration of the principle just laid down could not be desired. The blame rests with the erroneous mode of the use, and not with the substance used. As for the mere allegation of toxical power, Dr. P. would give very little for a medicine that could not produce such effects in any case. He suspected the efficacy of every agent whose powers were so feeble as not to render it noxious in its inappropriate or immoderate employment.

As to the remarks made by Dr. Condie in reference to the enthusiasm of the advocates of new measures, Dr. P. thought that such a charge in reference to anæsthetics was singularly out of place in Philadelphia. The error here seemed to be all on the other side. He did not wish to complain of the conservatism of the profession here generally. Their cautious skepticism in regard to medical novelties had its great and lasting benefits. But these anæsthetics are no longer a novelty. Their precise value has not been definitely determined, nor have we settled all the laws that should regulate their use; but that they have great and important uses can no longer be doubted. It appears certain that they will become a fixed portion of the armament of the surgeon and the obstetrician. Why should we in Philadelphia alone occupy this position of dogged resistance and refuse to receive them? Dr. Condie has warned us against the enthusiasm of novelty. Dr. P. acknowledged the truth and value of his remarks. There are *quidnuncs* in the profession as well as out of it, and they will run wild after

new hobbies. But he would remind Dr. C. that this is not the only dangerous enthusiasm. There is another that, in its relation to other matters, has been recognized and pretty well comprehended in our country, where it has received the generic title of *old-hunkerism.* It consists in an obstinate conservatism, which brands every new thing as an innovation, in the bad sense of the term, without waiting to see whether it may not turn out an improvement. It rests content with old things, it wants no progress, and it resists all new things as essentially evil or mistaken. He was afraid that there was a leaven of the enthusiasm of *hunkerism* in this resolute opposition to the anæsthetics. At all events, the truth must soon make itself manifest, and the fact of the matter be established. There can be no doubt that anæsthesia will become, when better understood, a well regulated and well established portion of our practice, and the most the Philadelphia profession can claim will be the merit of having been the drag on the wheel that prevented a too rapid attainment of the goal.

Dr. Bell, in reply to a question from the President, (Dr. Jackson,) said that Dr. Mussey, his former colleague in the *Ohio Medical College, and the Commercial Hospital of Cincinnati,* uniformly made use of a mixture of ether and chloroform for the subjects on whom he operated; and without, it is believed, in any case, sinister results.

Dr. Atlee said: There is one point in the case mentioned by Dr. Hays that, perhaps, may have been overlooked. If we take up any book on Surgery, and refer to the subject of operations on the neck, we will find that instantaneous death occasionally results during the operation, and that this is attributed to the entrance of air into the veins of the neck. The question, then, would naturally arise, Could such an occurrence have taken place in this unfortunate case, and death have resulted from this cause and not from chloroform? Always in dread of such an event, I have never administered anæsthetics in important operations on the neck, lest death accruing under such circumstances, might be erroneously attributed to chloroform, and thus impair the character of a very valuable agent.

Dr. Page remarked that, notwithstanding the current of the argument, the opinion of all present on the subject of the use of anæsthetics seems, "like a handle of a jug, all on one side." All of the gentlemen, including those who spoke on the negative side of the question, admit that under certain circumstances these agents may and even ought to be administered, while under other circumstance they should be repudiated as likely to be productive of injury. What then are the circumstances requiring their employment? and the answer is, who can tell? The opponents of their indiscriminate use employ them under very opposite conditions. We are told by some that they should not be applied in cerebral excitements, in disease of the heart, and in pulmonary affections, &c.; but Dr. Condie has used the anæsthetic in convulsions with marked benefit; and in asthma and difficulty of breathing, ether has been highly extolled; and it is very far from probable that, some of the many thousands who have been placed in a state of anæsthesia for surgical operations, the extraction of teeth, &c., and who have done well, should not have been at the time laboring under severe cardiac affection. Now, for my part, I consider that the chief use of the agent, and the principal cause requiring its administration, is for the relief of pain; but to its indiscriminate use I am as much opposed as any member of the profession. I regret that so few of the members here speak from the book or card. They give us the experience and observations of others and not of themselves, and we know that there are few subjects on which there has been so much written and to so little purpose, as on anæsthetics, within the last few years, except perhaps cholera. With me, after a principle is once adopted, it matters not where it comes from, nor does it require a great accumulation of evidence for its elucidation; and I look upon it as a fixed fact that the anæsthetic may be administered whenever severe and prolonged pain would be otherwise suffered, unless strong indications exist to the contrary. None of us would recommend a patient to be placed under the influence of sulphuric or chloric ether or chloroform for a trivial surgical operation, or for the extraction of a tooth, nor would we use them on ourselves, because the pain is soon over, and it is not worth while to run any risk; and in this sentiment I heartily concur, as risk there is; as we know that unfavorable results have followed

their administration; and strange as it may seem, many of the fatal cases have occurred after the performance of what are commonly called slight operations. If I recollect aright two fatal cases occurred in quick succession in New York; one when the operation was for fistula in ano, and the other for hemorrhoids, both very simple and every day operations in surgery; and we were thrown into the utmost consternation that human life should have been thus endangered, and could scarcely believe that the result was due to any other cause than the chloroform. But, sir, some of the most simple operations occasionally terminate fatally, without any discernible cause. I once saw a patient lose her life from the passage of a thread through a small vascular tumor in the bend of the arm; and I also saw M. Velpeau remove a small tumor from the shoulder of a woman, and she died in a few hours without any assignable cause. Now, sir, patients will die after operations, and sometimes suddenly, and the surgeon cannot with all his ingenuity account for the death, unless it be ascribed to the luckless anæsthetic.

But it is for the relief of pain during the performance of the more important operations only, as has been before remarked, that it should be administered, and here it not only relieves great suffering, but may have done away with past anxiety, and may remove or diminish future danger. The dread of pain is one of the most depressing and distressing influences to which the suffering patient, or one who is about to submit to a severe operation, is liable. Now if this can be removed, much is gained. The patient who has once made up his mind to the necessity of an operation, does not fear its ultimate results or consequences. If it is one which, of itself, compromises life, the mind becomes settled as to its necessity, and the great fear is of the pain which must be endured during its performance, and the great objection made is that it will *hurt*. Now all of this feeling yields to the confidence which the anæsthetic inspires, and the common question which the patient puts and has always put to the surgeon is, "can you not give me something to relieve the pain?" We all know how intimate the relations are between the mind and body; and if we keep in view the old adage *sana mens in sano corpore*, the whole matter will be fully understood. The mind and nervous system being placed at ease under the belief that no pain

will be experienced during an operation, no matter how severe, will diminish much the dangers of what all surgeons have too well known as the nervous shock, or that condition in which patients die from the immediate effect of operations. It was formerly a common thing to hear of persons dying on the table during an operation; but who has known this to occur in Philadelphia when ether has been administered, and we are all aware that it has been given extensively and almost indiscriminately?

Another argument against its use is that the plasticity of the blood is altered, and that the healing process will not take place so readily as when the agent has not been employed. Facts seem to prove the contrary. I have never seen the cure more tardy after the use of ether than without it, and indeed in some instances which have fallen under my observation, recovery has taken place with remarkable rapidity. I assisted Dr. Goddard in an amputation of the thigh after a gunshot wound of the knee-joint, when the injury was tremendous, and when all the circumstances were so unfavorable as to induce me to oppose the administration of ether, not because I thought that it would do harm, but because I thought that the patient would most likely die, and that the fatality of the case would be ascribed to the agent. It was however given under the advice of Drs. Jewell, McClellan, and Wilson of Bustleton, and the only unpleasant consequence was a slight vomiting and faintness. The wound healed, and the old gentlemen is now well, and an approver of ether from experience. I have performed capital operations when the patients have been under its influence, and I have not been satisfied that it has ever proved injurious. I amputated a man's arm, and on the fourteenth day he was well enough to elope from the almshouse. I have removed thighs, legs, the penis and the testicle, with the patients in an unconscious state, and they have all done well. I operated for strangulated inguinal hernia on a patient of Dr. Naudain, to whom chloroform had been previously given freely during the trial of the taxis; both by Dr. N. and myself; and at my visit on the thirteenth day, I received a message that the man had waited all the day before for me, and that he had gone out to walk. These cases and others in my own practice, besides a vast many which have fallen under my observation in the hands of others, make me believe that the agent may be often used

without injury, if not with advantage. I lost a patient eighteen months since, after the operation for hernia, when chloroform was employed, but I could not ascribe the death to the agent. I have lost others both before and since, when no anæsthetic was given.

It has been said that the color of the blood is changed, and that black blood flows from a wound after the use of anæsthetics, This I have not observed. After amputations when the arteries have been secured, which is immediately done, the tourniquet is partially loosened, and then it is that the black blood flows, but it comes from the veins and not from the arteries, and the observer, who is perhaps anxious to view it in this light, mistakes the one for the other; but when the constriction above is entirely removed, all bleeding usually ceases.

In medicine anæsthetics have been extensively employed, and even by those who repudiate them in surgery, without disadvantage, and many have been rash enough to use them freely in obstetrics.

In midwifery I have used ether with the view of promoting relaxation of the os uteri, vagina, and the neighboring parts, and to induce a free secretion from *the parts*, which is the harbinger of the coming good time to the patient and accoucheur, and so far I have had abundant cause to be satisfied with its use. It promotes secretion and induces relaxation, while it does not interfere with uterine contraction or the bearing down effort. This is, I know, contrary to theory, but I believe it to be the fact. It seems, as has been well established, to act especially on and to control the voluntary muscles. Now the patient should not be placed in a state of full insensibility, but should be so far affected as not to suffer pain; and while thus influenced the sympathetic or synergic action of the abdominal muscles and diaphragm will be readily called into play by that of the uterus, which acts involuntarily. We may, indeed, say that a patient suffering no pain will readily yield to this sympathetic action, and will bear down forcibly, when without a freedom from suffering, she would be almost unable to follow the assiduous directions of her accoucheur to assist herself. A remarkable case of this kind fell under my care a short time since, in the person of a young lady in her first confinement, who had been suffering

active pain from 7 A. M., to 4½ P. M., without making further progress than the dilatation of the os uteri to the size of a quarter dollar. She suffered much and cried loudly for something to relieve her. She inhaled ether; the dilatation took place speedily, *the parts* became relaxed and moist, she bore down *like a woman*, and before 6 o'clock the child was dressed and the mother bandaged up. She expressed herself as comfortable, and so she continued. I have never yet witnessed the occurrence of any unpleasant accident from the administration of ether during labor, and I have seen much suffering avoided.

We are told that it should not be given when instruments are to be applied, and for the reason that the practitioner should be advised by the patient when he is giving her pain and when he is doing injury. This is to a certain extent true, but obstetrics should teach the practitioner how to apply his instruments, and how to avoid mischief without depending entirely on the assistance given by the woman's silence or moans. Who ever yet pulled on the forceps without giving pain, and who has desisted because his patient cried out? Other indications do and should guide him; he should know when and how to operate, and should not trust entirely to his patient for the success of his practice. Nervous irritability may be mitigated in obstetrics as well as in surgery, by the timely and proper use of different remedies, and if we resort to ether instead of opium and its preparations, and other narcotics, it is because it is more efficacious and not more injurious. Every surgeon and every accoucheur will sometimes give the different narcotics. As before remarked, the full anæsthetic effect should not be induced; enough of the agent should be given only to relieve the pain, as it may have to be used for a considerable time.

One strong expression is that ether is intoxicating, but this must depend on the meaning of the term intoxication. If the soothing effect of opium, hyoscyamus, lactucarium, &c., or perchance their exciting or poisonous effects, or the phenomena attending convulsions, coma, concussion, &c., can be called intoxication, then the anæsthetic is intoxicating. We know that the effect of ether is transient and soon passes off, so that after its administration sensibility soon returns; but how soon would a young lady be able to leave a dentist's chair and go into the

street after an inebriation from brandy or wine. The effects of drink do not pass off thus suddenly, and etherization is not intoxication.

I do not wish to advocate the use of anæsthetics under all circumstances, nor their indiscriminate application. One circumstance contra-indicating their employment, although other things may call for them, is when it is absolutely necessary to keep a patient perfectly still, as during the operations for hernia, cataract, and others of equal delicacy, when a slight involuntary movement might cause a cut to be made where it should not be made. It should not be used in operations in the mouth, because the patient might not be able to get rid of the blood, and might suffer from its passing downwards. Other contra-indications must constantly arise in particular cases, which should be duly considered by the practitioner. Of this I am convinced, that it is not very easy to kill a person with ether, else death would have occurred in very many instances, for no agent has been so widely and indiscriminately used, and yet with so few bad consequences. Ether should be preferred to chloroform. It does not act so suddenly nor so powerfully, and experience teaches that it is the safer agent. A mixture of the two is used, but I think it objectionable, as ether is the more volatile, and if its effect is not speedily induced it will soon evaporate and leave the chloroform behind to have its full effect. The better plan would be to give ether alone, and then, should the patient be insusceptible to its action or become excited, a few drops of chloroform may be administered. Under all circumstances, a full supply of air should be allowed, and the more simple the apparatus employed, the better.

*Experiments proving that life may be preserved in warm-blooded animals after the destruction of a considerable part of the spinal marrow.* By E. Brown-Séquard, M. D., of Paris.

It was believed by all Physiologists, until within the last three years, that the destruction of even a small portion of the spinal marrow was a cause of rapid death. Some experiments, the results of which I communicated to the Society of Biology, at Paris, on the 2d of December, 1848, induced me to believe that death, after destruction of a part of the spinal marrow, is more in consequence of hemorrhage than of any thing else. Since that time I have discovered that pigeons and many other birds are able to live and even to grow, after the destruction of nearly half of the length of the cord. (See the *Comptes Rendus et Mémoires de la Soc. de Biologie*, tom. 2, p. 28 and p. 49.) But I had never seen life continue more than ten days in mammals, after the destruction of the whole lumbar spinal cord.

Recently, in New York, from experiments performed upon a young cat, I have discovered that life may persist more than seventeen days after the destruction of that part of the spinal cord which extends from the eleventh or twelfth costal vertebra to the sacrum. The animal is still living. Although paraplegic, it appears to be in good health. Since the operation was performed, it has evidently grown much. In this case the animal was operated upon after having been rendered insensible by chloroform, a measure which I found useful in preventing a great loss of blood, and the general nervous disturbance consequent upon such an operation.

Although unique till now, this fact proves that the continuance of life is possible in one species of mammals, after the destruction of a considerable part of the spinal cord.

From what I have seen in this last experiment, as well as in the large number of experiments I have performed during the last three or four years, I think I am authorized in concluding that the well known opinions of Legallois, Wilson Philip, Krimer, Chossat and others, in relation to the influence of the spinal marrow upon the heart, the stomach and lungs, upon the urinary secretion, and upon animal heat, are quite erroneous.

# CLINICAL REPORTS.

*Clinic of the Jefferson Medical College. Service of* PROFESSOR DUNGLISON.

(Reported by J. AITKEN MEIGS, M. D.)

*January* 24th, 1852.

The attention of the class was directed to the consideration of a highly important set of affections.

Cardiac disease is at all times the subject of painful interest to the persons affected, and not unfrequently the cause of considerable perplexity to the practitioner. Indeed, the least disturbance of the normal action of the heart is very often amply sufficient to fill the mind of the patient with intense alarm and anxiety. He at once supposes that he is the victim of a confirmed and incurable organic disease; whereas, when properly investigated, the symptoms are most frequently found to be evidences of some temporary excitement of the central organ of the circulation, produced by an unusual excitation or depression of the system generally. Of the great number of persons presenting themselves for medical examination and advice at the clinic of this institution, and complaining of some derangement of the heart's action, either as to frequency, force, or rhythm, comparatively few offer the evidences of a confirmed and well-marked structural disease of that organ. The majority of such cases are mainly dependent upon faulty innervation; being traceable to functional aberration on the part of some particular organ or set of organs, or to a plethoric, anæmic or depraved condition of the circulatory fluid.

Nevertheless, organic affections of the heart, since they have become the objects of careful research, and elaborate study, are found to be much more common than was formerly supposed; and you will recollect, that during the present clinical course, we have, in your presence, examined and prescribed for several cases, illustrative of various morbid conditions of the muscular tissue, and certain structural alterations of the valvular apparatus of the heart.

You see, then, the importance of a thorough study of these diseases, the necessity of mastering them in all their details, and obtaining some clear and definite conceptions as to the differential diagnosis between purely functional and essentially structural diseases of the heart; since mistakes in this respect will often be productive of much needless, and occasionally serious alarm, in the minds of the parties interested. Moreover, the success of our therapeutical applications, and the favorable or unfavorable character of the prognosis, will depend intimately upon the correctness and exactitude of our diagnosis.

I propose here to introduce for our mutual study and instruction, the following interesting series of cases, elucidative of a few of the prominent features of both functional and organic diseases of the heart; and illustrating not only the variety of causes which may give rise to these morbid conditions, but also the difficulty of diagnosis, and the consequent difficulty of successful and rational treatment—too often, indeed, unsuccessful even when the characters of the diseased condition have been accurately appreciated.

Several of these cases are examples of cardiac palpitation, some of which are purely functional in character, appearing to be unassociated with any other disease, while the others are more or less complicated. Of the complicated cases there is one of bronchitis and perhaps of tuberculous deposition; another, in some manner connected with the rheumatic diathesis; and a third, dependent upon torpor of the colon. Three of our patients are affected with organic disease of the heart. In one there is mitral insufficiency; in another, dilatation of the organ; in another, hypertrophy with auriculo-ventricular derangement; and, in a fourth, hypertrophy with disease of the semilunar valves.

Having detailed these cases *seriatim*, we shall consider the differential diagnosis between these two classes of heart affection.

Case I. Mary D——, æt. 25, of a pale complexion, light hair, middling stature, and unmarried, in here presenting herself for relief, complains, as you have heard, of intense pain in the præcordial region, radiating from the heart as a centre over the entire chest. She has been troubled with this pain, at varying intervals, for the last two years. No unusual motion of the heart was at first

experienced, but a year ago last Christmas she began to be aware of slight palpitation accompanying the pain, and paroxysmal in character. Latterly, the paroxysms of palpitation have increased so much in frequency and violence, that not only is her mind filled with great anxiety as to the result of her malady, but she suffers considerable physical distress, as you perceive, from the consequent dyspnœa.

The patient attributes her present ill health to the grief and trouble which she endured, in consequence of the loss of a sister to whom she was much attached.

The attack at first came on whenever she made any unusual exertion, or was more than ordinarily excited, depressed, or in any way agitated in mind. At the present time, the least exercise, as in the performance of her customary domestic avocations, is productive of a paroxysm of severe palpitation and its attendant dyspnœa. The oppression experienced at the præcordium during these attacks is occasionally so great, especially when she lies down, as to endanger suffocation.

She is also, at times, seized with vomiting or regurgitation without any preceding sickness or uncomfortable sensation; and is furthermore attacked, at irregular periods, with severe pain in the middle of the back. Her appetite is diminished; tongue pale, exanguious in appearance, and quivering when projected; bowels slightly constipated, more especially during the past few weeks; and this condition is, now and then, associated with acid or bitter eructations, and frequent discharges of flatulency.

Thus much for the general survey of the case. Let us seek further information from the aids furnished by the ear and the hand.

Percussion elicits no unusual or extended dulness, from which we legitimately infer that there is no enlargement of the heart; and, therefore, that the aberration in the action of the organ is not properly assignable to, or in any manner connected with, hypertrophy or augmentation of size in the organ eccentrically. Auscultation affords confirmation to the inference, that hypertrophy does not exist; for we find that the cardial pulsations, though evidently increased in frequency, are diminished in force, the systole of the heart being characterized by an irregular and fluttering effort; phenomena the reverse of those presented by thickness of the parietes of the organ. Furthermore, there is a

diminution of the sounds, and a general tremulous diffusion of the impulse, which is observed over a wider space, though certainly much weaker and less decided than in health.

It may be well to observe in this connection, that in the majority of cases of cardial palpitation, there is an increase instead of a diminution of the sounds, which are at times so loud as to be distinctly audible to the patient when in the horizontal attitude, and reclining on the left side. Again, accompanying the feeling of tumultuous commotion in the chest, there is often an ill-defined sensation of a roaring or rushing noise ascending towards the head, and following the course of the great vessels. This phenomenon is not observable in this case, and although we do not notice here the bellows murmur, which is said so frequently to accompany the first cardiac sound, with a little care it is possible to distinguish a faint humming sound, (*bruit de diable*,) over the great vessels of the neck. This, as you are aware, is considered to be indicative of an impoverished condition of the blood; and we see here further proof of general vascular atony, in the reluctance with which the cutaneous capillaries readmit the blood, which has been forced from them by pressure; the surface continuing, for some time, of a pale, dead white hue, instead of rapidly regaining its usual healthy tint.

The pulse, which ranges from 95 to 100 in the intervals, partakes of the same irregular and fluttering character as the impulse of the heart. During the paroxysms, it rises as high as 105 in the minute.

The paroxysms of dyspnœa continue in her case about half an hour, and recur whenever she becomes frightened or alarmed at any sudden noise, as the slamming of a door, &c., showing great irritability, and impressibility of the nervous system; and they are accompanied by constant distressing sighing, which—as I have elsewhere taught—is probably owing to the loss of balance between the amount of air inspired, and the quantity of blood thrown into the lungs, in this unusually impressible state of the cardiac centre; the result of which loss of healthy equilibrium is the insufficient aëration of the blood necessary to supply the wants of the economy; and the repeated and deep inspirations established to effect this indispensable aëration.

To obtain as clear and definite an idea as possible of the nature of the affection under which the patient is laboring, we shall endeavor to trace the cardiac disturbance to its proper origin.

Purely functional palpitation of the heart is referable to one or both of two great causes ;—defective or disturbed innervation, and derangement in the quantity or character of the circulatory fluid ; which derangement may consist in polyæmia, anæmia, or in a depraved condition of the blood ; in other words, a condition in which that fluid suffers some quantitative or qualitative change—some alteration in its sensible or chemical characters. Moreover, an obstinately deranged state of the heart, causing undue and persistent palpitation, may be the effect of previous disease. Thus, gouty and rheumatic affections often originate the morbid conditions in question ; and upon inquiry of this patient, we find, as you may have anticipated, that a few years ago she suffered from an attack of acute rheumatism.

The connection between rheumatism and cardiac disease is a matter of considerable interest, and one which has, within the present century, been much studied and investigated. You will have occasion to observe, among young persons especially, how frequently acute rheumatism is either accompanied or followed by some acute or chronic affection of the heart, and the more frequently a person is attacked with acute rheumatism the greater is the liability to organic cardiac disease.

In reviewing the history given by the patient of her malady, and the examination which we have made of the case in your presence, you will be ready to conclude that her cardiac affection is evidently functional—not organic in its character. The paroxysmal nature of the palpitation and the dyspnœa, the anæmic state, the dyspeptic phenomena which she presents, the neuralgic pain in the back, the general impressibility of the nervous system, &c., all tend to this conclusion. Our diagnosis, then, is that there is faulty innervation of the heart ; and indeed general erethism and impressibility of the whole nervous system.

The indications for treatment, under this view, are manifest. We must address our remedies to the nervous system, and endeavor to give tone and renewed vigor to the entire economy, by improving the composition of the circulating fluid, and inducing through it a new and healthy action in the tissues.

Now, the whole range of the materia medica furnishes us with nothing that will more readily effect this object than the chalybeate preparations. We might prescribe for her the Ferri pulvis of the last edition of the Pharmacopœia of the United States—*le fer réduit par l'hydrogène* of the French *pharmaciens*, which is a favorite with some physicians, but has no advantage over the Ferri subcarbonas, which I shall now order.

℞. Ferri Subcarbonat. ʒij.

Divide in chart. xii. quarum capiat unam ter in die.

The bowels are to be kept regular by an occasional dose of rhubarb and magnesia; the latter is selected as an antacid and laxative; and the former exerts, in addition to its cathartic property, a tonic influence on the alimentary tract. We shall likewise direct, that repeated and vigorous friction shall be made over the seat of pain in the back, by means of a coarse towel, or by the hand frequently dipped in wheaten flour to prevent abrasion of the surface; and shall request her to present herself at the clinic one week from this time.

Case II. Jas. McC——, æt. 41, a weaver by trade, suffers from palpitation of the heart, and severe cough, accompanied by profuse expectoration. He has for a long time been sensible of increasing ill-health, which from the detail of his symptoms is undoubtedly connected, either as cause or effect, with the cardiac derangement of which he particularly complains.

The present increase in the severity of his symptoms appears to be mainly attributable to a bronchial complication; for, in addition to his chronic malady, he is just now laboring under the effects of an attack of bronchitis; and we have purposely introduced the case to your consideration, as exemplifying not only several interesting facts connected with heart disease, but the increased difficulty encountered in arriving at a correct and satisfactory diagnosis in cases where the chronic ailment, oftentimes the original cause of the deterioration of health, is to a certain degree masked and obscured by some intercurrent affection.

Now, the most prominent of the symptoms presented by the patient, and most urgently demanding our attention and investigation, are the distressing and protracted dyspnœa—a symptom perceptible to you all, and the spitting of blood—hæmoptysis,

phenomena very alarming to the patient, and playing a significant part in the formation of our diagnosis.

The patient tells you that blood is mingled with his sputa—that he spits blood. It behoves us, then, to inquire what may be the cause of this, and what relation it bears to his present or past ill-health; and furthermore, whether or not this relation, if any such exist, be ominous of evil.

Inspection of the countenance and hands reveals, by the pallid hue of the skin, a slightly anæmic condition; and coupling this circumstance with the fact, that hemorrhages are very apt to occur in consequence of diminution in the quantity, or alteration in the quality, or consistency of the blood, we might be led to attribute to some such change in the circulating fluid the passive exhalation of blood from the pulmonary mucous membrane in this case. Pulmonary hemorrhage, however, is too frequently secondary, and ascribable in the great majority of such cases to organic disease, either of the heart or lungs. A common consequence of such organic disease is hyperæmia of the pulmonary vessels, the effect of a purely mechanical agency; and this condition is often the immediate precursor of those symptomatic or passive hemorrhages as they are called. It is the direct cause of the hæmoptysis, and is itself the effect of pulmonic or cardiac lesion. Thus, the pulmonary tissue may be filled with tubercles, which so impede and obstruct the pulmonary vessels, that mechanical hyperæmia is the result, followed by hemorrhage. So, too, disease of the heart may be productive of the same effect, by obstructing the free return of the blood from the lungs. In both cases the pulmonary capillaries become turgid, and transudation or exhalation of blood very readily takes place. In such cases, it rarely, perhaps never, happens, that the parietes of the vessels do not have their nutrition and cohesion so impaired as to render the escape of blood more easy.

On ausculting the patient, we find, that the inspiratory murmur is not continuous, as in health, but is interrupted, as by jerks or starts. This is very appropriately called the "interrupted or jerking respiration,"—*respiration saccadée* of the French writers, and is generally regarded as an unfavorable symptom, indicating as it often does, incipient tuberculous deposition. It ought usually to be looked upon as such; but as it would seem to be an

accompaniment of pleurisy, pleurodynia, and spasmodic asthma, in their incipiency, you will readily see, that its diagnostic value depends much upon the concomitant phenomena.

The patient complains of continued and distressing dyspnœa, the cause of which requires investigation; as difficulty of breathing is a phenomenon met with under a variety of circumstances, and may be caused by many different morbid conditions.

Physiologically regarded, dyspnœa is experienced whenever the normal relation between the amount of air inspired, and the quantity of blood circulating through the lungs, is in any manner disturbed. An effort,—oftentimes an exceedingly severe and distressing one,—is required to preserve this equilibrium. Whatever, therefore, prevents the proper aëration of the blood is a cause of dyspnœa. A little further reflection will show you, that diseases of the heart and lungs must be frequently attended with this uncomfortable symptom, in consequence of the obstacle which, in a greater or less degree, they offer to this indispensable process.

Undue activity of the circulation, faulty innervation of the respiratory muscles, pleurisy, emphysema, hepatization and tuberculization of the lungs, or any condition causing obliteration of the air cells, or excluding the air from any portion of the lungs, as in pneumonia, pulmonary hemorrhage, &c., where the bronchi and air vesicles sometimes become choked with blood and mucus; disease of the cardiac valves impeding the passage of blood into or obstructing its egress from the lungs, effusion into the pericardium, &c., for the reasons stated, are all more or less accompanied with dyspnœa.

Though the original difficulty of breathing was probably connected with the cardiac disturbance, the present increased dyspnœa, we are inclined to think, is mainly traceable to a pulmonary cause. Percussion aids us here; for we find, on examination, a very slight, but sufficiently perceptible, dulness under the left clavicle. This is unfavorable, inasmuch as when taken in connection with the jerking character of the respiration, the hæmoptysis, the dyspnœa, &c., it augurs incipient tuberculosis.

The rest of the chest is clear.

Auscultation reveals great obscurity in the sounds of the heart; it is indeed almost impossible to discriminate them; and

this, in part, is owing to the mucous rhonchi, which may be heard even before the ear reaches the chest of the patient; and by listening attentively, they are found to be intermixed with sonorous and sibilant rhonchi. The air enters the lungs freely and readily on the right side: on the left, less so; and we have the slight cooing and violoncello varieties of the sonorous rhonchi.

Of all the affections with which heart-disease is associated, pulmonary complications are the most frequent, and generally require the most energetic treatment. Bronchitis, pneumonia, and pleurisy are often co-existent diseases; sometimes superadded by the action of extraneous causes; and very often, it must be admitted, as effects of the cardiac derangement. So blended and intermingled, as in the present case, are the symptoms, at times, that it is extremely difficult and occasionally impossible to determine the exact nature of the two morbid conditions, and their relations to each other, or to ascertain to which is due the priority of occurrence.

Pulmonary hyperæmia resulting from cardiac disease may terminate, as is often the case, by the exhalation of blood from the mucous lining of the air passages; or it may run on so as to produce an inflammatory condition of the bronchial lining, or of the pulmonary tissue, and thus complicate the primary cardiac disease.

In consideration of the tuberculous tendency evinced by this patient, we shall put him on the use of the oleum morrhuæ, in the dose of a tablespoonful three times a day; and in addition thereto, with a view to its mixed eutrophic and tonic effects, direct him to take at the same time, ten drops of the liquor ferri iodidi, morning, noon and night, in a wineglassful of simple syrup.

In chronic diseases of the heart but little benefit may be expected from counter-irritation; but in a case like this, where pulmonic complication exists, a resort to some revellent agent, is indicated. We shall direct him to rub upon his breast, night and morning, the oleum tiglii, mixed with an equal portion of the oleum olivæ, until the peculiar eruption is produced; when the application must be discontinued, until the eruption has passed away. It may then be resumed. He will thus have all the benefit which interrupted counter-irritation is capable of effecting. As his cough is troublesome, and by its severity tends to keep up the hæ-

moptyis, he may take in the course of the day, in divided doses, a teaspoonful of the liquor morphiæ sulphatis, added to the ordinary domestic cough mixture—Hausmittel—of equal parts of vinegar, butter and molasses stewed together, which we are in the habit of prescribing in this clinic.

(To be concluded in next Number.)

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## BIBLIOGRAPHICAL NOTICES.

*A Treatise on the Diseases of the Chest; being a Course of Lectures delivered at the New York Hospital.* By JOHN A. SWETT, M.D., Physician to the New York Hospital; Member of the New York Pathological Society. New York, D. Appleton & Co., 1852. 8vo. pp. 585.

This work, as we are informed by the author, was originally published in the New York Lancet some ten years since. At "the repeated solicitation of his medical friends," he has revised these lectures, and has added those new facts which an enlarged experience, both in private practice and in the New York hospitals, has given to him. The form of lectures is, however, retained, and therefore the work to a certain extent loses in value as a regular treatise upon the diseases of the chest; for we do not think that the form of phraseology which may be admirably adapted to a lecture is nearly so well fitted for a thorough description of the phenomena and modes of treatment of disease. This objection is, however, of very little moment; we are disposed to allow to authors the greatest possible latitude in selecting the mode of treating the subject, which may suit their own fancy; and whether they choose to divide their work into chapters or cut it up into lectures, matters but little.

After the first two introductory lectures in connection with the physical exploration of the chest and with the rational symptoms of its diseases, the author proceeds at once into his subject, and takes up the history of bronchitis. In one of these preliminary lectures, he speaks of pain, dyspnœa, cough and expec-

toration as the four rational symptoms of diseased lung. Pain, Dr. Swett thinks, with great justice, is much more marked in pleurisy than in any other disease of the chest. We agree with him that it is almost the only disease in which the pain is violent, but not that the pain is more severe in slight cases than in those of more gravity. Pain of course becomes slight when there is a large effusion into the chest; but in almost all cases of very severe pleurisy, whether complicated with pneumonia or not, the pain is always great as long as there is little effusion into the chest; afterwards it is much lessened.

After passing through the subject of bronchitis, the author proceeds to enter upon the history of pneumonia. He remarks that chronic bronchitis, (in which we agree with him,) is not generally much under the influence of medicine. Still it is all-important to decide that a case of chronic cough depends upon bronchitis, and not upon any more dangerous disease of the lungs with which it may be readily confounded.

The description of the physical alterations of pneumonia might, we think, be much more full and more exact than they appear in Dr. Swett's work. Thus he speaks of abscesses following pneumonia as rare. They are, it is true, very rare after death, but we have good reason to believe that pneumonia may now and then end in abscess; although when this result takes place, the disease will almost always terminate favorably. Abscesses in the lung, our author states, are favored by two circumstances—one is the effusion of pus into the cavity of the pleura. "When this has occurred, it will sometimes happen that a distinct abscess will form in the lung, which may finally open into a bronchus, or communicate with the pleura." We have certainly never witnessed a case of the kind, and we may conclude that it must be at least very rare. The metastatic abscess is scarcely to be classed as one of the terminations of inflammation; it is simply a cause of it, not an effect; with this view we may infer that Dr. Swett also agrees.

Gangrene of the lungs, Dr. Swett states, is usually classed as an effect of inflammation. We were scarcely aware of that. For many years gangrene has been regarded as very rarely connected with pneumonia; sometimes, however, it is in part dependant upon it, and may follow an inflammation of the

lungs, just as it may upon one of any other part of the body. In many cases of the disease, gangrene of the lungs begins at once without being preceded by any obvious inflammatory action in the part.

In speaking of the treatment of pneumonia, the author has given us the statistics of M. Grisolle on the effects of treatment. These results coincide very nearly with what is generally believed. Bloodletting is the most important remedy, diminishing the duration of mild cases, and lessening the mortality in those of a severe class; but after bleeding, the author considers the most powerful remedy to be antimony. Eight to ten grains of it he considers as the medium dose during the twenty-four hours. Now, from our own experience, after having used antimony very faithfully and carefully for many years, we are led to a very different conclusion. It is a powerful remedy, perhaps the most powerful; but, at the same time, when used in the large doses recommended, is by no means a safe one; we have seen extensive ulcerations of the bowels produced by its use, even in cases in which no diarrhœa followed it, so that on the whole we would administer antimony very rarely in large doses as a contra-stimulant. Mercury is certainly about as good a remedy in treating pneumonia as antimony, and is free from many inconveniences which belong to the use of the latter medicine—we mean when employed as a contra-stimulant; but there is no objection to the use of antimony as a sedative expectorant when given in small doses.

Pleurisy our author also treats with some detail, and of course he enters into the pathological changes and mode of treatment. Then after passing through emphysema of the lungs and some other affections, he passes to the subject of tubercles in the lungs. The pathological changes in the lungs are of course described at length, although less carefully than they might be; but the tuberculous diseases of other organs, which form so large and important a part of the history of these diseases, are almost passed over. It seems to us that in writing the history of pulmonary phthisis, it is all-important to keep in view the fact that the deposition of tubercles and the changes produced by them constitute the anatomical characters of the disease. It is true these bodies are commonly more hurtful in the lungs than

in other organs, but the lungs are far from being their exclusive seat of origin; hence it is most important to keep in view the fact that consumption is a general tuberculous disease specially determined towards the lungs.

The history of the causes of tubercles in the lungs is treated of in much detail. The usual circumstances that favor the development of tubercles are stated, as well as some of the means of resisting their attack. Amongst the antagonising causes which check the development of phthisis, the author mentions one, of the truth of which we have long been abundantly convinced—that is, that the intemperate use of ardent spirits to a certain extent diminishes the chances of an attack of consumption. Of the two modes of death—by drunkenness or consumption—we trust that no one would have a moment's hesitation in preferring the latter to the former. Still the question arises, whether a physician may, without serious mischief to the patient, order the habitual use of wines or spirits in cases in which, from the history of the family of the individual, as well as the actual circumstances of the case, an invasion of pulmonary consumption seems to be imminent. As a rule, we would object to any medical opinion which might give to a patient the idea that alcohol is the best preservative against consumption, but in cases in which confidence may be reposed in the self-control of the individual, we believe that very often the physician is amply justified in recommending the use of moderate quantities of alcoholic drinks. Still, every caution must be used in giving advice of the kind, or the remedy may prove much worse than the disease. When consumption is once developed, however, the free use of alcoholic drinks is almost always injurious, often greatly increasing the fever. Under these circumstances they should be given only in small quantities as a prescription for the disease. But there are cases in which, from the emaciated aspect of the patient, and from a hereditary tendency to consumption, the onset of this disease is with reason feared, in which the moderate, careful use of stimulating drinks may with propriety be advised by physicians, who believe that their duty is to save life, and who would administer stimulating drinks on the same principle that they would give cod-liver oil or any other strictly medicinal remedy.

A number of remedies are afterwards considered by the author,

in the treatment of phthisis. Cod-liver oil he is disposed to distrust, and thinks it is soon to be forgotten. With this opinion we are far from coinciding. We believe that some oily substances have long been recognized as very useful in the treatment of phthisis, and that cod-liver oil answers the indications which demonstrate the utility of these oleaginous remedies better than any other material of the kind. There is no doubt that many individuals laboring under decided tuberculous disease are vastly improved by a course of cod-liver oil; the disease is apparently arrested, or, as many physicians say, is cured. We must confess, however, that we have been stupid enough to see very little proof of positive actual cure; but after a time the disease again becomes more active, and will resume its march until the termination. Still the remedy, on the whole, is by far the best yet discovered against phthisis, and we cannot but think Dr. Swett has treated it much too cavalierly. His remarks as to the use of the other remedies commonly used in the treatment are generally judicious; as to opium he lays down some well-timed cautions.

Dr. Swett next devotes a chapter to cancer of the lungs. This disease in the United States is certainly very rare, and then it occurs almost always in connection with some external cancerous disorder.

On the whole, although the work of our author, as far as regards the diseases of the air passages, is by no means free from faults of arrangement and some errors of more importance, it is in the main sound and based upon data which are received as facts in the best European schools. These are corroborated by his own experience, which, from the position he has enjoyed at the New York hospital, has been very extensive. We are but little disposed to criticise the arrangement of his subject, for that in part depends upon the radical defect we have already alluded to—that is, the arrangement of the work in lectures; but in part it may be ascribed to some errors as to the relative importance of particular subjects.

After having passed through the diseases of the lungs, the author then proceeds to the diseases of the heart. This part of the work is much more carefully executed than that devoted to the lungs. We do not know if it is a part which was origin-

ally published in the New York Lancet or not; if it is, it has certainly been attentively revised. After passing through a careful statement of the sounds of the heart in health, the author proceeds to an enumeration of the signs and symptoms of a diseased heart. This part of the subject is well treated of, and is quite thoroughly detailed. The different facts attested by Bizot, Hope, and Pennock are mentioned in connection with the portions of the text that belong to them. Passing to individual diseases of the heart, the author commences with pericarditis. After going through the history of this disease, he next proceeds to its causes. Amongst these he classes inflammatory rheumatism as the most powerful. We must confess that we are not a little disposed to doubt this. Pericarditis certainly does often occur conjoined with rheumatism, but less frequently than endocarditis; and we are induced to think that it occurs at least as often with pneumonia or pleurisy as with rheumatism. We agree with the statements given by some of the authors to whom Dr. Swett refers as to the comparative rarity of pericarditis in rheumatism.

Endocarditis is rather singularly mixed up in the arrangement of our author with pericarditis—that is, he enters upon the treatment of pericarditis after commencing the subject of endocarditis. The author remarks very truly that "the great cause of endocarditis is acute articular rheumatism;" and he then proceeds to say, that "the remarks that I made in relation to this cause, when speaking of pericarditis, apply precisely to endocarditis." We should say they do, with the very important proviso that endocarditis is rarely absent in a case of acute articular rheumatism, while pericarditis is present with almost equal rarity; that is, the one occurs as the rule, and the other the exception. It is indeed difficult to say why pericarditis should be more frequently present than pleurisy in this disease, the pericardium and pleura bearing always an exceedingly close relation together in their morbid relations; while the same close connections certainly do not exist between the lining membrane of the heart and the pericardium.

The author then states that "the rational and the constitutional symptoms of endocarditis resemble so nearly those of pericarditis." This is to a certain extent true, and increases somewhat the difficulty of diagnosis. Although we regard de-

cided pain as rather indicative of pericarditis, still in some cases of endocarditis there is pain, but it is usually slight and not constant, although it is indicative of obstruction to the circulation. No one, therefore, without the aid of other signs can rely upon the general symptoms, although these are tolerably good guides for the diagnosis. The most certain guide, as our author states, is the blowing sound. This is similar in some respects to that developed in anemia, although a certain degree of experience would point out the distinction between these sounds, which although nearly similar, are not precisely identical; the bellows sound resulting from anemia forming a peculiar musical tone very different from that of endocarditis. It is, however, much more easy to point out these differences in living patients, than to render them perceptible from a simple description. The author goes on to state that many cases of endocarditis are not marked by severe symptoms, and would be entirely latent if it were not for the bellows sound. In this we agree with him, but we may state that it is always the bellows sound appropriate to endocarditis, which has not the musical tone of that belonging to anemia.

The author afterwards passes on to another cause of confusion which he fancies to exist between two of the sounds of pericarditis and endocarditis. As to this cause of confusion we are obliged to give his own words:

"I cannot help alluding still further to the characters of the two characteristic morbid sounds heard in cases of acute pericarditis and of endocarditis—the friction sound and the blowing sound: for I am well aware, that no subject connected with the science of auscultation, has puzzled its followers more than this. For a long time no accurate distinction was made in the character of these sounds—they were constantly confounded with each other. After a time, however, the true distinction between a blowing sound and a friction sound was established. The ear became accustomed to discriminate them by the fundamental character of each—the kind of sound. Other circumstances, already alluded to, were noticed in connection with each. The superficial, diffused and moveable nature of the friction sound, as well as its comparatively short duration, and its being usually double, were carefully noted. While the blowing sound, by its greater concentration and fixedness, its tendency to pass along the course of the great vessels, or to exist at the apex, by its being usually single and continuing for a long period, became impressed with marks which, although not perfectly characteristic, are yet often of great value in doubtful cases. If you could readily distinguish a blowing sound from a friction sound in all cases, that would be enough for the diagnosis. But you cannot. A

friction sound may hardly be distinguished from a soft blowing sound, and both may become equally harsh and grating."

Now it certainly seems to us that the author has imagined that those sounds are very similar, or at any rate not unlike. This is undoubtedly an error. The friction sound is evidently external to the heart, and synchronous with the movement of the whole organ against the walls of the chest. The bellows sound is very different, and strictly coincident, generally with the systole, sometimes with the diastole of the heart.

Bloodletting and mercury are of course mentioned as the most efficient agents in checking inflammation of the serous membrane of the heart. They are such, undoubtedly, but they are not always required or even always admissible; if the patient be taken with these inflammations when he is already much exhausted, then general bleeding is of course entirely out of the question. Yet these very cases sometimes get well with almost as much rapidity as those in which the proper treatment has been called for during the course of the disease.

Dr. Swett next proceeds to the subject of the enlargement of the heart. His remarks on this subject are in general just and appropriate, especially when he alludes to the irregularity of the pulse. He remarks with great correctness that this is far from being a sign of disease; in many cases it is certainly unconnected with any organic affection.

Valvular diseases of the heart of course are of no little importance. We regret that the limits of this notice will prevent us from examining the diagnostic characters given by our author. He next passes through other affections of the heart of less gravity, and finally terminates the course of lectures with aneurism of the aorta.

We may, in concluding our remarks, state, that although we have found the work in several respects imperfect, and occasionally very different from what we have considered as strictly accurate in the details, yet on the whole it shows that the author is well acquainted with his subject, and in most respects it is an accurate and well digested compend of the state of our knowledge upon the diseases of the chest. A little more condensation of certain portions of it would, however, have left room for the author to have written more at large upon some points over which he has passed very lightly.

# THE MEDICAL EXAMINER.

PHILADELPHIA, MAY, 1852.

## PENNSYLVANIA MEDICAL COLLEGE.

We learn, with much pleasure, that the Faculty of this Institution is about to be strengthened by the accession of Drs. F. G. SMITH, J. M. ALLEN, and J. J. REESE, who have accepted the Professorships of *Institutes of Medicine, Anatomy*, and *Medical Chemistry and Pharmacy*. The two last named chairs have been lately vacated by death and resignation; the chair of Institutes is a new creation. These appointments are in every respect excellent, and cannot fail to advance the interests of the school in question. Drs. Smith and Allen have for many years filled lectureships in the Philadelphia Association for Medical Instruction, on the branches to which they are now translated in the Pennsylvania College; and the reputation which they have established, as eloquent, erudite, and judicious teachers, is second to none in the country. Dr. Reese has been for some time connected with the Philadelphia Medical Institute as a lecturer on Materia Medica and Therapeutics, and has been most favorably distinguished, both as a teacher and as a writer on this and other branches of medicine. His success in the chair of Materia Medica is a guarantee of his ability to do full justice to the kindred subject which he now undertakes.

We may also say, in noticing these appointments, that the high personal character and professional standing of the gentlemen named, cannot but give strength and popularity to any school with which they are connected. The Pennsylvania Medical College has already attained a most respectable position, and under this new organization, may rapidly anticipate a brilliant career. We are sure that it will have the cordial good wishes of the entire profession in Philadelphia. B.

We have the pleasure of laying before our readers, in the present No., a communication from Dr. *E. Brown-Sequard*, of Paris, now on a visit to this city, of which his father was a native.

This gentleman has attained a distinguished place amongst the experimental physiologists of the day, as one entitled to the utmost confidence in his observations and statements. He holds the high position of perpetual Secretary to the "Societé de Biologie" in Paris, and his communications have been extensively copied into all the standard treatises on Physiology, as well as into the foreign and domestic journals. We believe that it is his intention to give instruction in this department of Medical Science, which we are sure, from our knowledge of him, will prove both interesting and useful.

## MEDICAL NEWS.

DEATH OF PROFESSOR GRANT.—At a meeting of the medical Faculty of Pennsylvania College, held March 29th, 1852, the following preamble and resolutions were unanimously adopted:

*Whereas*, It has pleased the Supreme Disposer of events to remove from our midst, our beloved friend and colleague, Dr. WILLIAM R. GRANT, Professor of Anatomy in this school since 1843: therefore

*Resolved*, That this Faculty is deeply sensible of the loss it has sustained in the decease of one so long endeared to its members, by his purity of heart, his amiability of character, his uniform tenderness and courtesy, his professional zeal and ability, and his devotion to the duties of the chair of which he was the incumbent.

*Resolved*, That, in token of respect to the memory of Professor Grant, the Faculty will attend his funeral in a body; and that one of its members be appointed to prepare a biographical sketch of the deceased, to be delivered as an introductory lecture to the session of 1852–53.

D. GILBERT M. D., *Registrar.*

NAVAL SURGEONS.—The Board of Naval Surgeons, recently convened in this city for the examination of Assistant Surgeons, have reported the following duly qualified for promotion, viz: Washington Sherman, of the date of 1845, to take rank next after Passed Assistant Surgeon William A. Harris. Randolph F. Mason, of the date of 1846, take rank next after Passed Assistant Surgeon Henry O. Mayo; and John Rudenstein, of the date of 1846, to take rank next after Passed Assistant Surgeon Randolph F. Mason. The Assistant Surgeons of the date of 1847, who have passed, to take effect from the 26th of April 1852, will rank in the following order, viz.: Edward R. Squibb, Robert J. Farquharson, Philip Lansdale, James F. Harrison, James S. Gilliam, J. W. B. Greenhow.

RELATIVE MORTALITY OF THE STATES.—We have seen it stated that the proportion of deaths to the population in the several States of the Union, as shown by the census of 1850, is as follows: Vermont, 1 in 100; Iowa, 1 in 94; Georgia, 1 in 91; Michigan, 1 in 87; Tennessee, 1 in 86; North Carolina and Alabama, 1 in 85; South Carolina, 1 in 83; Maine, 1 in 77; New Jersey, 1 in 75; Virginia, 1 in 76; Illinois and Delaware, 1 in 73; Arkansas, 1 in 70; Texas, 1 in 69; Rhode Island, 1 in 56; Kentucky and Connecticut, 1 in 64; Maryland, 1 in 60; and Massachusetts 1 in 51.

THE

# MEDICAL EXAMINER,

AND

# RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. XC.—JUNE, 1852.

## ORIGINAL COMMUNICATIONS.

*Taliacotian Operation.* By JOSEPH PANCOAST, M. D., Prof. of Anatomy in Jefferson Medical College. Reported by CHARLES P. TURNER, M. D., of Philadelphia.

Mr. E—— C——, of Pittsburgh, having been, during the past winter, the subject of one of the most successful rhinoplastic operations ever performed, requests that the particulars of his case be presented to the profession through the pages of the Philadelphia Medical Examiner.

The subject of the operation about to be described is a stout, plethoric man, of sanguine temperament, æt. 45. About fourteen years ago he suffered from a severe bilious attack, in the treatment of which, a violent mercurial disease was superinduced, terminating in the destruction of nearly the entire nasal structure. The small remnants of the alæ had collapsed, and united by granulation, forming an irregular ridge, scarcely prominent above the facial level; while the two nostrils, deprived of their septum, formed a single oval orifice externally. The deformity

was great, and the source of extreme anoyance to the patient. He had worn, at different times, an artificial nose, ingeniously constructed by an Italian artist, but the irritation to the cuticle, and the obstruction to free respiration occasioned by it, had caused him to discontinue its use. During the past winter he applied to Prof. Pancoast, who decided to perform at once a plastic operation for the relief of the deformity. The operation was performed before the Class in the amphitheatre of the Jefferson Medical College, on the fourth of February. Preparatory to the operation, a piece of leather corresponding to the size of the nose wanted, was cut somewhat in the shape of a lateral half of a pair of bellows, the handle of the bellows corresponding to the projecting strip about to form the columna nasi. This model was then spread out on the forehead with the base uppermost, and its boundaries accurately marked out on the surface with ink. Care was taken that the model should be sufficiently large, as the complete success of this operation depends, in a manner, upon there being flap enough to allow for all subsequent contractions. The patient being then put under the influence of ether, the remains of the old nose were carefully pared, and the margins of the nasal aperture were cut into deep, narrow grooves. The flap of skin marked out on the forehead was then dissected up, together with all the areolar tissue down to the periosteum, so that the flap hung merely attached by a narrow strip between the eyebrows. Several small arteries bled freely, requiring ligation. After all bleeding had been arrested, the flap was twisted upon itself, so as to bring the raw surfaces into opposition; and the edges, after being bevelled off, were fitted into the edges previously prepared for their reception, and fastened with the plastic suture of Dr. Pancoast.*

The septum was also fitted into a transverse groove cut at right angles to the median line, and drawn firmly into its place by the suture. The nose thus formed was then carefully dressed, internally with greased lint, externally with strips of the same; together with the usual warm water top dressing. The patient was then removed to the Infirmary adjacent to the operating

*For a description of this suture, see Pancoast's Operative Surgery, 2d edition, p. 353.

room, where he was at once put to bed, and the following formula ordered:

℞. Liq. Potass. Citrat.
Liq. Ammoniæ Acet. *aa* f.℥iii.
Antim. et Potass. Tart.
Morphiæ Acetat. *aa* gr. i.
Spirit Etheris Nitrici, f℥ii.
M. S. Take a tablespoonful every hour.

Under the use of this preparation, attention being paid also to the condition of the bowels; the case progressed most favorably until Sunday the 8th, four days after the operation. On this morning the sutures and ligatures were removed by Dr. P., the parts being entirely united. The dressing was now changed. Strips of adhesive plaster were applied over graduated compresses, so as retain the nose in a proper position. Firm rolls of oiled lint were also introduced into the nostrils to prevent collapse. During the afternoon febrile symptoms set in, which were followed in the evening with traumatic delirium. The patient, imagining that some enemy was seeking his life, attempted to throw himself from the window of his room. He was restrained with difficulty by the physician in attendance, and was at last quieted by opiate injections and anodynes internally administered. Towards midnight he fell asleep and rested quietly till morning. Subsequently, the case progressed without an unfavorable symptom. The nose was carefully modelled at every dressing. Occasionally slight granulations sprung up at the alar junctions, which were speedily removed by the Argent. Nitras. The wound in the forehead was treated with the cold water dressing and gradually filled up by the modelling process of Macartney, leaving very little scar. During the seventh week of treatment, the nostrils were trimmed with a straight bistoury into a symmetrical shape; silver tubes were also made from wax models, and fitted into the nostrils. A gutta percha shield appropriately shaped, was fitted closely over the nose, and so fastened with straps so as to prevent all motion of the new member. At the commencement of the eighth week, at the time of the patient's discharge, the appearance of the nose may be thus briefly described: Anterior surface smooth

and uniformly rounded; superior junction slightly irregular, the prominence caused by the twisting of the flap not having entirely disappeared; lateral edges regular, showing very little scar, except at the upper part of the right margin, where it joined the prominence caused by the twist; inferior surface firm, with the edges of the nostrils smoothly turned in; septum slightly prominent, yet firm, and capable of affording considerable support as a columna nasi. In short, the results of the operation have been most satisfactory, not only to the patient himself but to all those who carefully noticed the progress and successful termination of the case. A similar operation, equally successful, was performed last summer by Dr. P. in the case of a young lady from North Carolina. In each of the *nine* rhinoplastic operations hitherto attempted by Dr. Pancoast, the parts have uniformly united by the first intention, and success is mainly to be attributed to the superiority of the *plastic* suture over every other form of ligature.

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*Influence of the Imagination of the Mother upon the Fœtus.*
By L. Slusser, M. D., of Canal Fulton, Ohio.

Whether the fœtus in utero can be affected in its development by extraneous causes, operating through the imagination of the mother; or, at what period of utero-gestation an arrest or perversion of development can take place, if at all; or the precise time at which those influences cease, admitting that they may be produced—are subjects upon which the profession are divided. Without designing to take either side of a question so obscure, and yet so speculative, I shall detail a case in point, allowing the reader to form his own conclusions.

Mrs. R——, aged about 34, a lady of more than ordinary strength of mind, and of cultivated intellect, was married in March, 1850. She is of sanguine temperament, and has always been regular in her menstrual function. About four months after marriage, she became pregnant; but had an abortion in the second month, excited, as she supposed, from fatigue in a long walk. Her convalescence was somewhat tedious, as she suffered considerably from uterine hemorrhage.

Her catamenia restored, continued uninterrupted until June, 1851, when they were again suppressed. The ordinary indications following, she suspected herself again pregnant, in which suspicion she was in due time confirmed by unmistakable signs. Gestation progressed without the occurrence of anything worthy of note, to the sixth month; up to that period she enjoyed unwonted health. Appetite good—bowels regular—spirits buoyant —sleep refreshing—in brief, she was entirely free from those tormenting sympathetic troubles, no less common than harassing to the pregnant female. Desirous of offspring, she looked forward with bright hopes and fond anticipations to her expected confinement.

About this time, a cub bear, brought from California, was purchased by a citizen of the town and kept in an out building of a lot adjoining her residence. The animal, unused to close confinement, kept up a strange and unearthly noise, much resembling that made by a lunatic brother of Mrs. R. who had been under her special charge for several years previous, but now an inmate of an asylum. The peculiarly distressing noise made by the animal, occasioned, as Mrs. R. supposed, by want of food, distressed her exceedingly. She had frequent opportunities of seeing the animal, which always increased her trepidation of mind, which was naturally sensitive. Every effort to control her feelings—to fortify her mind, and resist this influence, was unavailing. The bear seemed ever present in her mind. This constant excitement soon began to sensibly affect her health. Her rest became broken—appetite impaired —bowels costive; in short the whole train of sympathetic disorders frequent in her condition, were unusually aggravated. Medication afforded but temporary relief. Efforts were made to have the bear removed, but they were unavailing.

On Saturday morning, Feb. 28th ult., while yet in bed, she was awakened from sleep by a discharge of water—the membranes having ruptured spontaneously, and without pain. She immediately took a portion of oil, which operated in a few hours. During the day she had a free discharge of water, especially at every movement of the body, but she experienced no pain. In the evening I was called in—made an examination,

and found the os uteri slightly dilated, but tense—the head presenting. About midnight she was delivered of a female child, much emaciated, and in a state of asphyxia. By means of external stimuli, and the substitution of artificial respiration, the child was resuscitated, when I tied the cord, and separated it from the placenta which followed soon after.

The child lived but about twenty hours. The following is a report of an examination made of it by Dr. Dorland and myself, previous to its interment.

The feet and ankles resemble talipes valgus. The soles of the feet flat, and the heels projecting beyond the usual length. The thighs flexed upon the abdomen, and the flexor muscles so contracted as not to admit of full extension, without great stretch of the tissues involved. The same was the case with the upper extremities. The arms could not be raised above a right angle with the body. The wrists turned out—the fingers over-lapped each other, and their flexor tendons were contracted. The nails were elevated in the centre, and quite pointed, much resembling claws. The arms, legs and back were covered with a fine hair from three to six lines in length, of a dark brown color, and so abundant as to strike all who beheld it with wonder and astonishment. The skin along the limbs and back was remarkably rough. In other respects, the appearance of the child was natural, though we did not examine the internal organs. The facial and cranial developments were perfect. The child had nursed, and had a motion of the bowels previous to its death, but no discharge of urine.

The physiological question involved in this case is, could the fœtus, at the period of advance indicated, (not less than six, nor more than seven months,) be susceptible of an alteration from a normal condition, presupposing that up to that period there was a perfect development? As the muscular and dermoid tissues are the last formed, could their development have been arrested from extraneous causes operating through the mind of the mother?

*Case of Poisoning by Oleum Gaultheriæ.* By THOMAS J. GALLAHER, M. D., of Pittsburgh, Pa.

A youth, named W. Wall, aged nine years, of a sanguine temperament, and easily affected with vomiting and purging by the reception of indigestible articles into his stomach, was persuaded by some boys to swallow a large quantity of the oil of gaultheria. The quantity which he drank cannot be exactly ascertained; though from the statements of the boy himself and others who were with him, we are led to believe that there was at least half an ounce. This occurred on Friday evening, April 23d, 1852, at five o'clock, when his stomach was, comparatively, if not entirely empty. A short time after this, he returned home and ate some supper. After supper he commenced vomiting, and speedily ejected from the stomach all it contained. What he threw up was strongly scented with the oil of mountain tea. The parents thinking he had been eating some of the leaves of this plant, were not at first alarmed about him, but supposed as soon as the stomach was cleared of its contents, he would get better, as he had had like spells before from eating articles equally indigestible. Retching and vomiting, however, continued the whole of the ensuing night whenever anything, as a sup of water, was given to him. The following morning, April 24th, at ten o'clock, I was called to the case.

On arriving, I heard the history of the case, as above described, and further that the patient had had two copious evacuations from his bowels during the night, in both of which the odor of the oil was clearly perceptible. At this time the irritability of the stomach was great, everything received into it being immediately thrown off. The patient complained of very severe and constant pain in the epigastric, and in the inferior part of the hypochondriac regions, which was greatly increased on pressure with the finger. His skin was hot; pulse 125 strokes per minute; mouth parched and dry, tongue dry, smooth and slightly swollen; and his speech rather indistinct, in consequence of the swollen condition of the tongue. The symptoms, however, which were peculiar in this case, were a most inordinate, uncontrolled appetite for food, notwithstanding the irritability of the stomach; a

very slow, laborious, prolonged and peculiarly loud respiration, not stertorous; and a marked dulness of hearing, without impairment of the intellectual faculties. The boy was very restless, and there was a slight increase in the intenseness of the beating of the carotid arteries. His eyes were slightly injected with blood, though this is presumed to be owing to his constant cries for something to eat. His thirst was not as great comparatively as his hunger. He felt no pain in his head, and the temperature of this organ was not greater than that of his body. The pupils of his eyes dilated and contracted freely on the absence and the presence of light. The reasoning powers, so far as I could judge, remained unimpaired, and there was no stupor further than that produced by the dulness of hearing.

The opinion which I formed of the case was, that the patient was laboring under acute gastro-enteritis, from the direct contact of the poisonous oil with the gastro-enteric membrane, and that the nervous centres which govern the functions of hearing and respiration were so injured that they could not develop their nerve power with their accustomed facility.

Eight American leeches were applied to that part of the abdomen in which there was the greatest tenderness; and when these came off, a warm poultice of bread and milk was ordered to be placed over the same part, and to be renewed every fourth hour. A few grains of Hyd. Chlor. Mit. were rubbed up with a scruple of Sacch. Alb., and divided into several parts. One of these was ordered to be dusted upon his tongue every third hour; a teaspoonful of gum-water to be given immediately afterwards, to enable him to get it into the stomach. Every article in the form of food or drink was strictly prohibited, excepting a teaspoonful or two of cold water or gum water occasionally. A saline injection was administered, which was to be repeated every two hours, until it operated freely upon the bowels. I gave the Hyd. Chlor. Mit. in order that it might carry off, by its cathartic action, if it should remain upon the stomach, all the offending oil which might yet remain in the intestines. A portion of the patient's hair was removed from his head, and cold water, by means of a sponge, constantly applied to it.

Next morning, April 25, 8 o'clock. Patient worse. He has had but little vomiting since last visit, though has frequent de-

sire to do so. His importunities for something to eat are piteous. Four ounces of blood, by means of cups, were taken from his epigastrium, and two from behind his ears. Powders discontinued. Poultices and injections continued.

Four o'clock same day. Better. Tongue moist, and abdomen less tender. Slept some during the day. A consultation was held at this hour. Patient pronounced improving. Ten o'clock P. M. Remains better, but still complains of great epigastric oppression and tenderness. His hearing has improved, breathing less laborious and prolonged. Cupped again on the abdomen to to the extent of five ounces. Cold to the head discontinued.

26th. Decidedly better. Hearing entirely restored. Pulse 100 per minute. Appetite still remains voracious. A fly blister was applied to the abdomen, to be followed by poultices. Larger quantity of gum water allowed.

27th. Still improving. Blister raised admirably. Slept soundly all night. Appetite less ravenous.

From this date the patient gradually improved, and in two weeks was entirely restored.

*Remarks.*—The principal object in reporting this case is to record the effects of the Oleum Gaultheriæ upon the human subject, when given in an over dose. But few instances of poisoning from this article are on record, and these are not accurately described, therefore the medicinal and toxicological properties of it are but imperfectly known. Writers describing gaultheria attribute to it only aromatic and slightly astringent properties. Instances are mentioned of death from its use in large doses, from its causing inflammation of the stomach.

The case above described clearly shows that this plant, or at least its essential oil, possesses more properties than are usually attributed to it. The peculiar symptoms which were produced by its specific action in this instance, were: 1st, great dulness of hearing, without a general disturbance of the cerebral functions; 2, a slow, laborious and loud respiration, not stertorous; 3, a most voracious appetite for food, accompanied by symptoms which indicated gastro-enteric inflammation. These symptoms plainly indicate that Oleum Gaultheriæ acts as a direct and powerful sedative, when given in an overdose, upon those nervous centres which govern the functions of hearing and respiration;

and that it is a powerful irritant to the gastro-enteric mucous membrane, with which it comes in contact, lighting up in it intense inflammation, which inflammation was accompanied by a peculiarly morbid condition of the gastric nerves, as evidenced from the great appetite with which it is attended. It does not appear to exert any specific influence over the cerebro-spinal centres generally, but only upon a few situated in the medulla oblongata.

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*Mortality of Philadelphia for January, February, and March, arranged from the Record kept at the Health Office.* By WILSON JEWELL, M. D.

The following tables have been carefully collated from the mortuary record kept at the Health Office, of the deaths reported to have occurred within the city proper and the several districts, making returns to the Board of Health during the first quarter of the present year, 1852; commencing on the 28th of December, 1851, and terminating on the 27th of March, ult., embracing a period of 13 weeks, or 91 days.

In classifying the causes of death, the recommendation of the American Medical Association has been followed, so far as it would serve as a guide; but in the nomenclature, the record, as found at the Health Office, has been strictly adhered to, which will account for the want of uniformity in the names of several of the diseases, and an occasional repetition.

Table No. 1 furnishes the total number of deaths for each month during the quarter, classified in the order approved by the American Medical Association.

The total number of deaths from all causes, amount to 2785. The population of those districts making returns to the Board of Health, being set down at 409,000, would give 1 death in every 181, and shows an average of 30½ deaths per day, for the quarter.

The deaths in January exceeded those in February, by 198, and in March, by 168.

The record shows an excess of deaths among males of 101.

By deducting the "still born" and the deaths from "External causes," "Old Age" and "Debility," which amount to 347, or 12 per cent. of the total, and 2438 deaths are recorded from recognizable diseases, being equal in number to 26 per day.

Out of the whole number of deaths, including the "still born," 1347, or 50 per cent., were among children under five years of age; of these, 33 pr. ct. occurred from scarlet fever, convulsions, inflammation of the lungs and bronchia, and from small pox.

Table No. 2 contains an acccurate list of the names of the several diseases found in the record, properly classified, together with the number of deaths therefrom, at fifteen distinct periods of life.

Of the deaths from disease, consumption of the lungs contributes a large share, viz., 358, equal to 14 pr. ct., and shows about four deaths daily. Small pox claims 258 deaths, varioloid 6, and variolous fever 1; in all 265, or 11 per cent. of the mortality during the quarter. It is worthy of remark, that the deaths from small pox during these three months, exceed those of any one whole year since 1804, with the exception of 1824, when the deaths for that year from small pox amounted to 325. Judging, therefore, from the present prevalence of the disease in our city, the inference is, that the mortality will be greater this year, than that of any former period. Three-fifths of the deaths from small pox have been under ten years of age.

One hundred and ninety-five deaths are set down to inflammation of the lungs, of which number, 108, or more than half, were under five years of age. Eighty-nine deaths are charged to inflammation of the bronchia, 68 of which were under five years.

Scarlet fever has furnished 126 deaths, all except six being under ten years.

Convulsions give 141 deaths; 131 occurring previous to the tenth year of life: 86 of which were under one year.

Table No. 3 presents in a summary form, the total number of deaths during the quarter, for the fifteen distinct periods of life. By this it appears that 615 or 1-5th of the whole number of deaths, took place before the termination of the 1st year of life. After this period, the highest number of deaths occurred between the ages of 20 and thirty, viz. 312.

Table No. 4 shows the highest, lowest and mean of temperature of each month during the quarter; also the amount of rain, in inches, which fell in each month during the same period.

For this table we are indebted to the record kept at the Pennsylvania Hospital by Dr. Conrad.

TABLE NO. 1.

*Deaths for the first quarter of* 1852.

| | Jany. | Feb. | Mar. | Male | Fem. | Total. |
|---|---|---|---|---|---|---|
| 1. *Endemic and Contagious Diseases.* Zymotic or Epidemic, | 244 | 231 | 201 | 342 | 334 | 676 |
| 2. *Uncertain or general seat.* Sporadic Diseases | 91 | 84 | 106 | 149 | 132 | 281 |
| 3. Of the Nervous System, | 162 | 150 | 139 | 254 | 197 | 451 |
| 4. Organs of Respiration, | 287 | 221 | 240 | 391 | 357 | 748 |
| 5. " Circulation, | 22 | 19 | 27 | 35 | 33 | 68 |
| 6. Of the Digestive Organs, | 57 | 36 | 46 | 63 | 76 | 139 |
| 7. " Urinary " | 6 | | 3 | 8 | 1 | 9 |
| 8. " Organs of Generation, | 19 | 13 | 17 | | 49 | 49 |
| 9. " Organs of Locomotion, | 6 | 5 | | 8 | 3 | 11 |
| 10. " Integumentary System, | 2 | 2 | | 1 | 3 | 4 |
| 11. Old Age, | 36 | 18 | 15 | 20 | 49 | 69 |
| 12. Of External causes, | 31 | 18 | 25 | 53 | 21 | 74 |
| Still Born, | 51 | 40 | 50 | 80 | 61 | 141 |
| Unknown, | 23 | 22 | 20 | 39 | 26 | 65 |
| | 1037 | 859 | 889 | 1443 | 1342 | 2785 |

TABLE No. 2.

1. *Endemic and Contagious Diseases.—Zymotic or Epidemic.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cholera Infantum | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Croup | 33 | 28 | 13 | 9 | 32 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 |
| Diarrhœa | 13 | 13 | 8 | 4 | 2 | 1 | 0 | 1 | 4 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 26 |
| Dysentery | 17 | 17 | 5 | 3 | 5 | 4 | 1 | 2 | 1 | 5 | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 34 |
| Erysipelas | 19 | 15 | 15 | 1 | 0 | 1 | 0 | 0 | 6 | 6 | 3 | 4 | 3 | 2 | 1 | 2 | 0 | 44 |
| Fever | 3 | 4 | 1 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 |
| " Congestive | 1 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| " Bilious | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| " Intermittent | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| " Remittent | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 2 | 0 | 0 | 0 | 6 |
| " Scarlet | 55 | 71 | 14 | 30 | 43 | 32 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 126 |
| " Typhus | 16 | 12 | 1 | 0 | 0 | 1 | 0 | 2 | 9 | 6 | 3 | 4 | 2 | 0 | 0 | 0 | 0 | 28 |
| " Typhoid | 9 | 11 | 0 | 2 | 2 | 0 | 0 | 3 | 8 | 1 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 20 |
| " Variolous | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Hooping Cough | 4 | 3 | 3 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Influenza | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 3 |
| Measles | 21 | 17 | 5 | 15 | 13 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| Small Pox | 142 | 116 | 55 | 29 | 53 | 27 | 6 | 16 | 33 | 15 | 14 | 7 | 0 | 3 | 0 | 0 | 0 | 258 |
| Syphilis | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Varioloid | 2 | 4 | 1 | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | 342 | 334 | 127 | 99 | 154 | 79 | 9 | 28 | 67 | 36 | 29 | 23 | 11 | 10 | 1 | 3 | 0 | 676 |

2. *Uncertain or General Seat.—Sporadic Diseases.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abscess | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| " Psoas | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| " Throat | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Cachexia | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Cancer | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| " Breast | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 4 |
| " Sore Mouth | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| " Cheek and Tongue | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Congestion | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Cyanosis | 5 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| Debility | 36 | 27 | 37 | 4 | 0 | 0 | 1 | 1 | 2 | 3 | 4 | 9 | 1 | 1 | 0 | 0 | 0 | 63 |
| Dropsy | 12 | 14 | 0 | 3 | 4 | 2 | 0 | 1 | 1 | 4 | 3 | 3 | 3 | 2 | 0 | 0 | 0 | 26 |
| Gangrene of Foot | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Gout | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| Hemorrhage | 5 | 7 | 4 | 1 | 0 | 1 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| Inanition | 15 | 14 | 25 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 29 |
| Inflammation | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Inflam. Parotid Gland | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Malformation | 5 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Marasmus | 44 | 38 | 42 | 14 | 13 | 1 | 1 | 1 | 2 | 1 | 3 | 2 | 1 | 0 | 1 | 0 | 0 | 82 |
| Mortification | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 |
| Mortification of Foot | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Scrofula | 7 | 3 | 1 | 1 | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 10 |
| Tabes Mesenterica | 2 | 5 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Ulceration | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| " Throat | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| " Neck | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| | 149 | 132 | 133 | 33 | 22 | 5 | 2 | 4 | 14 | 13 | 16 | 20 | 9 | 6 | 4 | 0 | 0 | 281 |

3. *Of the Nervous System.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abscess of Brain | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Apoplexy | 13 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 2 | 1 | 6 | 4 | 0 | 0 | 24 |
| Chorea | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Convulsions | 76 | 65 | 86 | 19 | 18 | 8 | 1 | 3 | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 141 |
| " Puerperal | 0 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Cerebral Fever | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Concussion of Brain | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| Congestion " | 18 | 7 | 4 | 1 | 3 | 1 | 0 | 0 | 4 | 4 | 1 | 2 | 2 | 2 | 2 | 1 | 0 | 25 |
| Disease " | 14 | 17 | 9 | 7 | 5 | 3 | 2 | 0 | 2 | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 31 |
| Dropsy " | 34 | 31 | 21 | 24 | 16 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 |
| Effusion " | 13 | 8 | 8 | 3 | 6 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| Epilepsy | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 4 |
| Inflammation of Brain | 42 | 27 | 15 | 18 | 12 | 7 | 3 | 3 | 4 | 3 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 69 |
| Mania a Potu | 13 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 5 | 2 | 5 | 0 | 0 | 0 | 0 | 15 |
| Palsy | 20 | 14 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 3 | 2 | 5 | 9 | 10 | 2 | 1 | 0 | 34 |
| Softening of Brain | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| Spasm of Glottis | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Thymic Asthma | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tetanus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Tympanitis | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

### 4. *Organs of Respiration.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abscess of Lungs | 6 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| Asthma | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 |
| Congestion of Lungs | 14 | 12 | 9 | 3 | 3 | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 3 | 1 | 1 | 1 | 0 | 26 |
| Consumption " | 181 | 177 | 7 | 10 | 3 | 7 | 2 | 17 | 109 | 86 | 56 | 29 | 22 | 8 | 2 | 0 | 0 | 358 |
| " Laryngeal | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| Disease of Lungs | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 6 |
| Dropsy of Chest | 6 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 10 |
| Hemorrhage from Lungs | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 7 |
| Hepatization of " | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Inflammation of " | 105 | 90 | 55 | 24 | 29 | 7 | 3 | 5 | 19 | 10 | 12 | 12 | 6 | 11 | 1 | 1 | 0 | 195 |
| " Chest | 3 | 5 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 8 |
| " Pleura | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 4 |
| " Larynx | 4 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| " Throat | 3 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| " Bronchia | 46 | 42 | 44 | 16 | 8 | 2 | 0 | 0 | 2 | 3 | 1 | 3 | 4 | 2 | 3 | 0 | 0 | 88 |
| Disease of Chest | 2 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Effusion " | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| Tuberculosis | 6 | 6 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 12 |
| Ulceration of Larynx | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Coryza | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Empyema | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Effusion of Pleura | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 391 | 357 | 123 | 59 | 51 | 19 | 9 | 27 | 143 | 108 | 75 | 53 | 43 | 29 | 7 | 2 | 0 | 748 |

### 5. *Of the Organs of Circulation.*

| | Male. | Female. | Under 1 yr. | 1to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aneurism of Aorta | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Angina Pectoris | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| Anæmia | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 |
| Disease of Heart | 22 | 16 | 5 | 0 | 2 | 0 | 0 | 2 | 7 | 5 | 3 | 7 | 3 | 4 | 0 | 0 | 0 | 38 |
| Dropsy " | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Effusion " | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Enlargement " | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 10 |
| Inflammation " | 4 | 3 | 1 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 7 |
| " Vein | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Malformation of Heart | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 36 | 32 | 8 | 0 | 3 | 3 | 1 | 3 | 10 | 10 | 3 | 14 | 9 | 4 | 0 | 0 | 0 | 68 |

### 6. *Of the Digestive Organs.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abscess of Spleen | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| " Liver | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Abdominal Dropsy | 5 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 7 |
| Cancer of Stomach | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| " Pylorus | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Colic | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| Congestion of Liver | 3 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| Disease of stom. & bowels | 4 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 7 |
| " Stomach | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| " Liver | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |
| Fatty Degen. of Liver | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Gastric Fever | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Hemor'ge from Bowels | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| Hernia | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 4 |
| Cancrum Oris | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Inflam. Stom & Bowels | 17 | 27 | 20 | 4 | 1 | 1 | 0 | 1 | 5 | 5 | 2 | 2 | 1 | 2 | 0 | 0 | 0 | 44 |
| " Liver | 11 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 1 | 1 | 1 | 2 | 0 | 0 | 14 |
| " Peritoneum | 3 | 20 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 3 | 2 | 3 | 0 | 2 | 0 | 0 | 0 | 23 |
| Intussusception | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Jaundice | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Mortification of Bowels | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Perforation " | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Schirrus of Pancreas | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Ulcerat. Mouth & Throat | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| " Stomach | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| " Bowels | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Worms | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 63 | 76 | 37 | 9 | 4 | 2 | 0 | 2 | 25 | 17 | 11 | 15 | 6 | 8 | 3 | 0 | 0 | 139 |

### 7. *Of the Urinary Organs.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90 | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Disease of Kidneys | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| " Bladder | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| " Urinary organs | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Inflam. of Bladder | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 4 |
| " Kidneys | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | 8 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 2 | 0 | 1 | 2 | 0 | 0 | 9 |

8. *Of the Organs of Generation.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cancer of Uterus | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| Childbed | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Hemorr'ge from Uterus | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Inflammation of " | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Menorrhagia | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Puerperal Fever | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 2 | 10 | 12 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| Ovarian Tumors | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| " Dropsy | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Chlorosis | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Phlegmasia Dolens | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Puerperal Phlebitis | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Rupture of Uterus | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 20 | 7 | 3 | 1 | 0 | 0 | 0 | 0 | 49 |

9. *Of the Organs of Locomotion.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Caries of Spine | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Hip Disease | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Malformation of Spine | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Spinal Irritation | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Spina Bifida | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Rheumatism | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 |
| | 8 | 3 | 3 | 1 | 1 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 11 |

10. *Of the Integumentary System.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anthrax | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Purpura Hemorrhagica | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Ulcer | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Ulceration of Cheek | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 4 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11. *Old Age* | 20 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 23 | 33 | 5 | 2 | 69 |

12. *From External Causes.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Asphyxia | 2 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Burns and Scalds | 7 | 3 | 2 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 10 |
| Casualties | 19 | 3 | 2 | 0 | 3 | 0 | 1 | 0 | 8 | 1 | 5 | 1 | 0 | 1 | 0 | 0 | 0 | 22 |
| Drowned | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Fracture of Thigh | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Fracture of Skull | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Intemperance | 10 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 4 | 3 | 2 | 0 | 0 | 0 | 0 | 14 |
| Neglect | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Poisoning | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Suffocation | 2 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 |
| Suicide | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 |
| Violence | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | 53 | 21 | 8 | 1 | 6 | 2 | 1 | 2 | 15 | 10 | 16 | 6 | 3 | 4 | 0 | 0 | 0 | 74 |
| Unknown | 39 | 26 | 25 | 4 | 7 | 2 | 0 | 0 | 5 | 3 | 7 | 7 | 3 | 1 | 1 | 0 | 0 | 65 |
| Still born | 80 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 141 |

TABLE NO. 3.

*Deaths during the quarter at fifteen distinct periods of life.*

| | |
|---|---|
| Under 1 year, | 615 |
| 1 to 2 | 280 |
| 2 to 5 | 311 |
| 5 to 10 | 140 |
| 10 to 15 | 31 |
| 15 to 20 | 78 |
| 20 to 30 | 312 |
| 30 to 40 | 240 |
| 40 to 50 | 182 |
| 50 to 60 | 163 |
| 60 to 70 | 113 |
| 70 to 80 | 105 |
| 80 to 90 | 60 |
| 90 to 100 | 12 |
| 100 to 110 | 2 |
| | 2644 |
| Still Born | 141 |
| Total, | 2785 |

Of the deaths recorded during the quarter, 261 were people of color; 258 were from the almshouse and 16 were from the country, as follows:

| | Blacks. | Almshouse. | Country. |
|---|---|---|---|
| January | 90 | 89 | |
| February | 83 | 84 | 5 |
| March | 88 | 85 | 11 |
| Total, | 261 | 258 | 16 |

TABLE NO. 4.

*Meteorological Summary.*

| | TEMPERATURE. | | | SNOW AND RAIN. |
|---|---|---|---|---|
| | Highest. | Lowest. | Mean. | Inches. |
| January | 33.23° | 21.77° | 27.05° | 2.011 |
| February | 39.96 | 28.15 | 34.05 | 2.810 |
| March | 49.90 | 33.61 | 40.75 | 4.270 |

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*Notes on Bedford Springs, and the Diseases in which a resort to them is useful.* By CASPAR MORRIS, M., D. of Philadelphia.

Physicians in all our great cities, and in many country places, are annually consulted by those under treatment for chronic diseases as to the *best* place to which they shall resort for the benefit of change. Watering and bathing places are too often recommended without any discrimination, under the vague impression that mere change of scene and change of air, and relaxation from customary pursuits, are all-efficient agents in the restoration of healthful action to the organs, and sensations to the body and mind. The power of these influences is undoubtedly very great, and should never be overlooked in our estimate of the value of causes; yet they should not be permitted to usurp the position of chief agents, much less to exclude from our regard others equally operative. The *deleterious* influence of change of water is universally recognized; every ailment experienced during travel, and many subsequent inconveniences, are, even in popular language, ascribed to it. Nor is this at all irrational. Next to the air we inspire, the water we drink is the most essential to our existence of all the influences by which it is supported. Taken into the stomach in quantities varying in different persons, but in all vastly greater than the solid aliment, and passing directly by endosmosis into the circulating fluids, quantity and quality alike must produce a powerful effect on the blood, and through this fluid on the actions of the several secerning organs which eliminate from the system, either the poisonous, extraneous or effete matters which are found in it. The value of springs impreg-

nated with saline matters in larger proportions, or of a character different from those found in common water, has always been recognized; and many of the places frequented by the invalids of the old world at the present day, have been thus resorted to from the earliest periods of which records have been transmitted.

This testimony of experience is of great value, since nothing but truth abides the test of long and close scrutiny.

It is not, however, by experience only that the worth of remedies is to be determined, since we are all familiar with the observation, that ill observed facts make a fictitious experience. It is therefore always important to investigate the character of agents at the same time that we watch influences, that the knowledge derived from either source may reflect itself on that deduced from the other. Hence arises the necessity for chemical analysis, by which we are enabled to confirm or refute the claims set forth in behalf of any given water.

Among the many springs charged with mineral ingredients, which are scattered over our country, few have attracted more attention, or maintained their reputation longer, than those near the town of Bedford, in the county of the same name, in this State. Yet to the members of the profession in the city of Philadelphia, their merits are almost unknown, and but few, comparatively, of our citizens resort to them for that renovation of health they are so well calculated to promote. Unnoticed in the Dispensatory of Wood and Bache, and but slightly in the original work of Dr. Bell on Mineral Waters, our knowledge of them is limited to a brief tract read before the medical faculty of Pittsburgh by Dr. Church of that city, so far back as the year 1825. Having twice derived great benefit from a personal resort to the Springs, and frequently from the use of the water at home, I have thought it not improper at this season to invite the attention of the readers of the *Examiner* to the subject, in the hope that others may be induced to try their virtues.

Bedford County lies near the Southern boundary of the State of Pennsylvania, in the midst of the western spurs of the Alleghany mountains, and abounds in all the variety of soil and surface which belongs to mountainous districts; well cultivated and

fertile valleys alternating with mountainous ridges. The town of Bedford lies on the southern fork of the Juniata; and about two miles from it, in a narrow valley, are the Springs. There are three routes by which it is approached from the eastward. The Baltimore and Ohio Railroad passing through the fertile farms of Washington County, Maryland, and the rugged scenery which is so celebrated at the place where the Shenandoah and Potomac divide the Blue Ridge, and then across the the valley of Virginia, carries passengers to Cumberland, from whence a rough stage road of thirty miles leads to the Springs. The Susquehanna Railroad from Baltimore, or the Columbia Railroad from Philadelphia, convey them to Harrisburgh, where they can either take the Central Railroad to Hollidaysburgh, following the course of the Juniata to that point, from which stages are also required to the Springs, the distance being about as great as that from Cumberland, and the stage road of the same character; or the Cumberland Valley railroad, passing through Carlisle to Chambersburgh, where it terminates, affords a very pleasant route. From Chambersburgh the distance is sixty miles, by good turnpike and comfortable stages. This road crosses all the mountain ridges, and presents a ride of unrivalled attraction to those who have strength to endure the fatigue, and taste to enjoy the delights of mountain scenery; good stopping places on the way present accommodations for those who are unable to accomplish the whole distance without rest. The town of Bedford itself, has no attractions, but good lodgings are to be had there by those who do not desire to stay at the springs, carriages passing to the Springs at all hours to take invalids there, or convey the water to them.

The natural beauty of the valley in which the springs are found is great, and the arrangements for the reception of visitors sufficiently convenient, though susceptible of great enlargement and improvement. The buildings are erected at the foot of one spur of a mountain which rises abruptly behind them to the west, while the valley is bounded on the eastern side by a similar hill which, clothed with wood of uncommon beauty, rises from the borders of the stream which waters the valley. It is at the foot of this hill the mineral spring is found, bursting from a fissure in lime-stone rock, and discharging, with but little fluctuation, a barrel

of water per minute. Terraced walks are cut on this hill, leading to the summit, where a pavilion presents an opportunity for rest; while the view which it opens over the valley in which the town of Bedford lies, affords an ample recompense for the toil of the ascent. To those fond of investigating the mysteries of nature, the fossil remains, found abundantly in the limestone and red sandstone formations, present constant attractions of unusual interest; while fishing and shooting furnish amusement of a healthy kind to those of less scientific tastes. These accessory circumstances are important, yet the object of this notice is rather to draw attention to the qualities and influence of the waters. Within a very small area are to be found one spring of pure slate water; another impregnated with hydro-sulphuric acid; a very copious spring of mountain limestone water, and that which gives especial value to the spot, "the mineral spring." This diversity in the water is easily explained, from the geological character of the valley, lying, as Mr. Rogers, the State Geologist, expresses it, on the "dislocated side of a synclinal trough or basin in the strata, which are there steeply uptilted, and hence there is probably a very extensive surface drainage." The red sandstone, the slate and the fossiliferous limestone, are here all brought to the surface, and from the different nature of these strata the various characters of the water here thrown out are derived.

I have been permitted to see the MSS. notes of the analysis of the Sulphur Spring made by the Rev. Dr. Humphreys, of St. John's College, Annapolis, which indicate a very decided character of the same kind with that of the Sulphur Springs of other localities. I have, however, never tested its virtues, and am not competent to determine its merits.

The water of "the Mineral Spring," as it is called, was analysed by Dr. Church, of Pittsburg, in the year 1825; who gave the result to the public through the medium of a Communication to the Pittsburg Medical Society. Dr. C. says, "The temperature of the water was 58° F., while that of the atmosphere was 70°," and gives the specific gravity as 1029, and then details the various means to which he resorted to test the saline ingredients. According to the analysis of Dr. C. "a quart of water evaporated to dryness, gave thirty-one grains of residuum. The same quantity of water treated.

agreeably to the rule laid down by Westrumb, contained eighteen and a half cubic inches of carbonic acid gas. The residuum treated according to the rules given by Dr. Henry in his system of Chemistry, gave the following result:

| | |
|---|---|
| Sulphate of Magnesia, | 20 grs. |
| Sulphate of Lime, | 3¼ grs. |
| Muriate of Soda, | 2½ grs. |
| Muriate of Lime, | ¾ grs. |
| Carbonate of Iron, | 1½ grs. |
| Carbonate of Lime, | 2 grs. |
| Loss, | ¾ grs. |

Making a total of 31 grains; to which must be added 18½ inches of carbonic acid gas."

The analysis thus described was made twenty-seven years since at the Springs. A quantity of the water was sent to me last autumn, in well cleansed bottles, closely corked and sealed, and the following is a memorandum of the result of an analysis made by my son, J. Cheston Morris, in the laboratory of Professor Booth, and under his superintendence:

"One pint of the water evaporated at 240° F., yields of solid residuum - - - - - grs. 22.201

| | | | |
|---|---|---|---|
| $CaO, CO_2$ | Carbonate of Lime | 2.120 | |
| $CaO, SO_3$ | Sulphate of Lime | 11.274 | |
| $MgO, SO_3$ | Sulphate of Magnesia | 3.974 | |
| $(Al_2O_3+Fe_2O_3) SO_3$ | Sulphates of Alumina & Iron | 1.280 | |
| $NaO, SO_3$ | Sulphate of Soda | 3.092 | |
| $NaCl$ | Chloride of Sodium | 0.343 | |
| $SO_3$ | Free Sulphuric Acid | 0.128 | |
| $SiO_3$ &c. | Organic matter and Silica | *trace* | 22.201 |

"In the estimation of the iron as a persulphate, there is probably an error, which would, if corrected, increase slightly the amount of free sulphuric acid. The quantity of iron and alumina is so small as to render it almost impossible to separate them correctly."

It will of course, be observed that the results of these analyses differ materially. The absence of carbonic acid gas in the latter, is readily accounted for by the presumption that it escaped; but

while Dr. C. found but thirty-one grains of solid residuum in the quart, the analysis made by my son gives not less than forty-four grains. The relative proportion of the several ingredients is also materially different, the sulphate of magnesia giving place to the sulphates of lime and soda as the predominating ingredients, though the actual quantity of the sulphates of magnesia and soda taken together in the quart of water is nearly two-thirds that of the former, supposed by Dr. Church to exist in the same quantity of the water.

Every one must at once admit that a water so highly charged with saline ingredients must produce a decided impression on the stomach and bowels. Even admitting that there is no imbibition of the saline matter into the blood, so large a quantity passing over the mucous membrane of the alimentary canal, must stimulate the peristaltic action by mere mechanical irritation. But if, as I believe, it passes directly into the circulating fluid, without any change, and the saline materials, mingling with those which already exist in the serum of the blood, are presented to the emunctories of the liver, the kidneys and the skin, to stimulate them to an excess of action, we must admit that the result must be a strong impression, either for good or ill, as the condition of the patient may be adapted to its use or not. It is, I know, a common remark that if the benefits derived from a residence at these Springs, be due to the peculiar ingredients held in solution by them, we ought to be able to produce the same results by the employment of the same salts dissolved in the same quantity of fluid artificially. To this it is only necessary to reply, that we are never able by synthesis to produce a compound in all respects analogous to that from which a given result is produced by chemical analysis. The art of the chemist may ascertain the amount of solid matter, but cannot decide positively as to the precise relations it occupies before being subjected to his experiments; much less can he determine that it shall combine in precisely the same manner. The sources from which the saline materials are derived, are quite unknown, as is also the manner of their introduction into the water. One of the many interesting subjects for investigation, presented by geology, is the question whence these saline impregnations are supplied. If, as is generally presumed, by drainage of water through deposits of the material, how is the quantity dis-

solved kept so uniform from age to age, and how are the relative proportions of the different ingredients preserved without variation?

Leaving these points, however, for future investigation, permit me to solicit the attention of your medical readers to the nature of the cases in which they may anticipate benefit from these waters. First in importance and frequency I should place those suffering from that deranged condition of the digestive organs which is so common among persons of sedentary habits and constant devotion to business. What the precise pathological condition of such cases is, it may be difficult to determine. It is generally believed that the functions of the liver are imperfectly performed. The stomach is enfeebled, and the nervous system exhausted. The food is imperfectly digested, the bowels are disposed to constipation, and the mind loses its natural vigor. The anxieties of the counting-house, the mental application of the divine, the physician and the lawyer, create numberless cases of this kind annually; and though the relaxation and amusements of the bathing places, and the invigorating influence of sea atmosphere may afford some relief, these do not act so directly on the organs whose functions are impaired, and cannot, therefore, produce so useful an impression as is received at the Springs.

The sensible action of the water of "the Mineral Spring" at Bedford, is on the kidneys, producing very prompt and profuse diuresis; on the skin, giving rise to very free perspiration; and on the bowels, causing gentle catharsis. It will thus be evident that all the emunctories are stimulated to increased activity; the discharges are copious, and yet not only is no debility induced, but there is an actual increase of vital force, in proportion to this activity. I have myself twice gone to Bedford, so prostrated as scarcely to endure the fatigue of the journey, and wholly disqualified for all exertion, and have in both instances returned, at the end of a fortnight or three weeks, restored to my wonted power of labor; and have witnessed similar results in the cases of friends and patients. This increase of energy cannot be justly attributed to the mere catharsis and diuresis, disgorging the portal circulation, and thus promoting digestion and assimilation; though, undoubtedly, much is due to this cause.

Though the quantity of iron is so small that it can scarcely be supposed capable of producing any very decided impression, it is possible that the sulphuric acid may add intensity to its action. Many persons, on partaking of the water, are sensible of a feeling in the head very similar to that produced by the mineral tonics, and which renders it impossible to continue to use it, unless the system is relieved by purging. In such cases, the use of a blue pill at night, and the addition of a small quantity of sulphate of magnesia to the water taken in the morning, removes all the unpleasant impression. The degree of benefit derived from the use of the water, is much influenced by the manner of its employment. The patient should rise early, and, before dressing, drink half a pint of the water in his room. After dressing he should resort to the spring, drink a tumbler of the water, and then walk smartly, either in the pavilion or on the walks provided for the purpose in the vicinity of the spring, for at least ten minutes, at the end of which time another tumbler is to be taken, followed by a similar walk. This process should be repeated, alternating the draughts and walks, until five tumblers of the water are drunk, in the course of an hour or an hour and a half. Those who are able should go to the top of the mountain, to which a well graded walk of a mile, leads; seats are provided at proper distances, on which those may rest who are not able to accomplish the whole distance. Two hours should be occupied in the drinking and walking before breakfast, during which time the skin and kidneys will pour forth an amount of fluid proportioned to the quantity which has been swallowed, and these secretions should be promoted by exercise adapted to the strength of the invalid. The quantity mentioned will generally occasion some three or four watery evacuations from the bowels, of a bright yellow color, without pain or exhaustion. Should this not occur during the two hours following breakfast, another glass should be swallowed before dinner; and in case the bowels should still resist the influence of the water, a dose of blue pill should be taken at bed-time, followed, in the morning, either by calcined magnesia, or the addition of epsom salts to the water. I have never known the water to prove violently or painfully active, but in one person. In such an event the use of it should be suspended. I have always kept a supply of the

water at home, and have always found the use of it there remove that restless, irritable condition of the nervous system, caused by a slight disturbance of the digestive functions, which, in persons of what are called a bilious temperament, so often destroys the comfort of life. Like the draught of the fabled spring, it restores the spirits, and the capacity of enjoyment.

There is another large class of patients, whose diseases depend on the same causes, who derive equal benefit from the resort to the Bedford Springs—those who suffer from what is known as sick headache, in all its grades. An annual visit of a fortnight or three weeks, is found by many to diminish the frequency and intensity of these attacks, even where it does not entirely remove the cause. The same remark is applicable to those who suffer from the headache of irregular gout. In truth, so decided is the action of this water on the liver, that all the various forms of bilious derangement derive benefit from its use, unless there be some local inflammation. Cases thus complicated are always injured by it.

But while the class of patients thus far alluded to are found chiefly in our great cities, there is another of kindred character which is found in the miasmatic districts of the country; persons in whom the liver is either engorged or otherwise disabled for the proper performance of its functions, and who, with sallow complexion and languid appearance, find themselves unable to perform their accustomed duties. Such persons should always pass the last weeks of August and the month of September, in some situation free from the miasm which gives rise to remittent and intermittent fevers. Strange as it may appear, these diseases are unknown in the vicinity of Bedford. The temperature of the night is always so cool, that blankets are required on the beds, and often fire in the sitting rooms during the evening, even while the thermometer at mid day rises to 75° or 80°. The condensation of the moisture thus evaporated during the day by the coolness of the night, causes the valley to be filled by a dense fog every morning, which is deposited on the leaves of the trees which clothe the mountains, giving them their peculiar luxuriance of growth and beauty of foliage. From this well known character of the place, some have hastily inferred its liability to autumnal fever. Dr. Watson, who has resided there twenty years,

and whose father had the entire medical charge of the town and neighborhood before him, assured me no case of intermittent or remittent fever had ever occurred under his observation. During one of my visits at the Springs, a young gentleman from Maryland, who was subject to constant recurrence of ague every few weeks, had one of his usual attacks, and I found on making enquiry at the stores where medicine was sold, that quinine was but little used, and received from all sources ample confirmation of the statement of Dr. Watson.

In the large class of cases known as anæmia, in which, from some unknown cause, the blood becomes vitiated, and the system consequently enfeebled, much good will be derived from the resort to Bedford. The quantity of iron in the water, though small, is in a condition to be absorbed and applied directly to the purpose for which it is needed, and its usefulness is enhanced by the cotemporaneous impression of the saline matter in the water, and the purging and diuresis.

The influence of this water on the health, has always been an ample compensation for the difficulty and fatigue of getting to the Springs. Railroads now facilitate the access, bringing it in fact within a few hours easy travel;—and whether we regard the healthfulness of the locality—the attractiveness of the scenery at the spot, in the vicinity and on the route, or the influence of the water itself, Bedford Springs present attractions to the valetudinarian, which cannot be surpassed by any part of the United States.

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*Modification of the Bivalve Speculum.* By JOSEPH SMITH, M.D., of Danville, Ky.

GENTLEMEN,—Having found considerable difficulty in using the bivalve speculum, on account of the protrusion of the soft parts between its blades when expanded, except by a modification of the instrument, as suggested by Dr. Bennet's work on the uterus, and not being able to get one so modified, a remedy suggested itself to me, which I have tried with complete success. It is to have a thin gum-elastic tube, or open sac, to enclose the speculum. It should be made very thin, and fit the

instrument closely, when unexpanded. To do this, it must of course be larger at one end than the other. Not being near any gum-elastic establishment, I used a new tobacco pouch of this material. By cutting and sewing, one was made, which, though not so neat, has answered well. It does not increase the difficulty of introducing the instrument, and permits a free expansion of its blades.

I have not seen a suggestion to remedy this difficulty. If none has been made, I think you will confer a favor on many persons by publishing the above.

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## *The Professional Education of Dentists.*

By E. B. GARDETTE, M. D., Dentist.

To the Editors of the Medical Examiner.

GENTLEMEN:—When I claimed the courtesy of you to republish my "Memorial" addressed to the Medical Colleges of our country, recommending the establishment of Lectures on Dental Surgery, I had no thought that the kindness you then extended would involve a necessity for asking to occupy another page of your valuable journal. I had no desire nor expectation to open an argument or controversy with other journals or individuals, as to the propriety or feasibility of the project then suggested solely from a wish for improvement in the mode of educating Dentists. Hence, I was careful to assail no one, but to make a sinple proposal, designedly in *memorial form*, for the consideration of the medical schools, who, if disposed to give it their attention, would necessarily seek information from all reliable sources before adopting any plan. Then would have been the time for the friends of such a scheme to defend it by argument, and consider the deficiencies felt to exist in other systems of professional education; and then too might its enemies properly make their objections.

But the Editor of the "Baltimore Journal of Dental Science," has seen fit, in a selfish fear lest the mere proposal itself should injure the prospects of the Baltimore Dental College (of which he is a professor), to misconstrue or misunderstand my language, and oppose the project of such Lectureships. That writer, in a determination to anticipate and forestall any action on the sub-

ject, pre-judges, passes sentence, and *would* hang up the proposition as an absurd abstraction, while at the same time he *professes* respect for, and attaches great importance to, the opinions of the proposer. It remains to be seen whether the sole and summary judgment of the Editor of the journal will sway those who are to determine this grave question.

My reliance upon the peaceful and polite character of my paper, did not save it from a headlong declaration of war by the Baltimore journal, an attack both inconsistent with the public parade of sentiments or professions towards me, and uncalled for or forbidden by its *memorial form* and careful expressions. My rejoinder in a few merely explanatory remarks, made through your journal in June last, did not prevent the Editor of the Journal of Dental Surgery, in his July number, from again intruding upon his readers the subject of my proposal and myself. On this occasion he is influenced by no higher considerations than before, at a moment when my private affairs did not permit me to see his remarks; and it is under the influences natural to this state of things, that I now speak of the Baltimore Journal. I wish to do so as one who discerns the springs of action that govern even so huge a machine—as a quarterly periodical. In this, my course is a defensive one, and due alike to those of my professional brethren who unite with me in contempt for the selfishness that will descend to quotations from parts of sentences, calculated to mislead the reader, as to the real statements that have been made the objects of its premature and unfair comments.

So far from having been "*very decided in my expressions of satisfaction at what I saw and heard at the Examinations of the Baltimore College of Dental Surgery*," it was, on the contrary, the dissatisfaction experienced then, which confirmed my previous opinion, that the establishment of dental colleges would not supply the want felt in reference to educating dentists, and would interfere with the eventual standing of the professson itself. It was this strengthened feeling, and none other, that finally induced the suggestion to have dental surgery taught, with all other specialities of medicine, in medical colleges. I am constrained to deny entirely having sanctioned the course of instruction in *Dentistry proper*, which I had the opportunity to see at the Bal-

timore College of Dental Surgery during two successive years, —1848 and 49; the observations and examinations then made, resulted in a permanent belief of its incapacity to fulfil the objects of its incorporation, or meet the hopes and wishes of educated, well bred dentists. I will not attempt to sustain the justice of this opinion by inquiries, that might be regarded as unkind or invidious, into practical effects upon the profession and the community, but the defective system through which young men have received half-way medical, and still less dental instruction, will prove itself and its influences in professional histories yet to be written.

In reference to my examination of *operations performed* by the pupils of the school, and my having approved of what I saw, which the Baltimore Professor states with a view to make my present opinions appear inconsistent or contradictory, the simple truth is that I saw nothing—for I did not see the operations *performed*; and it is too late in professional life with me, to determine the merits of a surgical operation, by looking at or examining its external surface. I could not know, of course, the previous condition of the teeth operated upon, the correct or incorrect exercise of judgment by which the young operators decided to form and fill cavities in the teeth with metal; I could not determine the propriety, in manner or extent, with which the sound or unsound parts had been removed; I could not judge of the time and skill and brains devoted to these manipulations, the good sense or professional theories exhibited in the application of knowledge, whether for determining upon or the performance of operations.

As regards the *artificial teeth* shown me on the occasion referred to, it is almost needless to say to Dentists that any smart goldsmith's apprentice, after a few months' experience, can get up such specimens at least as well, he having had no part in the most important duties of settling the extent or peculiarities of the artificial fixture, or its adaptation to living parts for the patient who must endure it in his mouth.

Neither the smooth and brightly burnished metal fillings or the specimens of plate work, not in use, exhibited as the performances of the graduates of Baltimore Dental College, could be regarded as evidences of successful teaching in either branch

of professional education; they were looked at with kindly interest, but as a mere formality, and a natural disposition to encourage young gentlemen who had just graduated, (the only operations brought before me, were, as Chairman of a Committee of Examiners for awarding a prize to the best *graduate*,) would of course govern any expressions that could have been uttered on the occasion. The all important decision had been made; they were already admitted into the ranks of the profession. The number of competitors, to the best of my recollection, was eleven or twelve, and of these several had been practising dentists for several years before going to the College. The prize was awarded to a young gentleman who had been the industrions private pupil of a competent preceptor for two years, not so much for the show of operations, as for the modest intelligence and practical common sense he applied to his profession.

Such were the true impressions made upon my mind at the period to which the Editor of the Baltimore Journal has referred; they were never uttered until now, except confidentially to Dr. Hullihen, of Wheeling, and Dr. Harwood, of Boston, gentlemen as well as distinguished Dentists, whom I met at Baltimore. That I should have politely avoided the expression of such unwelcome views as those we entertained, to the faculty, of whom I was the kindly treated guest, is, I trust, only consistent with the ordinary good breeding which responds to attentions and hospitalities. The system of extending social civilities that shut the mouth for every opinion *unfavorable* to the objects of gentlemen who have extended them (I do not say *with* that object) is to be blamed for the want of frankness or plain dealing too common under such circumstances; it is open to the suspicion of belonging to the same tactics to which editorial life is subjected, in the gifts that *anticipate opinions*, and often purchase positive expressions favorable to the views of the giver, at the expense of facts and sincerity. But in either case, I am free to admit the impropriety of such a disregard of justice, and especially where serious professions, or institutions for obtaining knowledge, are concerned.

In proposing the establishment of professorships on dental surgery in medical colleges, I did not compare such a mode of educating dentists with that of existing dental colleges with which I was acquainted, simply because the comparison, as I conceived

it, would have been no compliment to the latter; my advocacy of a better plan was at most a negative condemnation of the one pursued at Baltimore, and if I was mistaken in this preference, the result would have proved it so. For I believe that calling public attention to any new scheme of professional education for the dentist, even from a bad or impracticable one, some benefit would be likely to ensue, and especially to a superior existing system. But in truth the Baltimore Dental College had had a fair trial; it was, and is, unsuccessful; not, however, for the reasons assigned by the Editor of the Baltimore Journal, but really because it did not offer to the profession and the public materials that inspired confidence. With the single exception of Dr. H. H. Hayden, the College, it may be said without disparagement, has been the medium for lending reputation and importance to names but little known in the profession, rather than deriving strength and advantages from those who composed its dental faculty. The two chairs entrusted to medical men, I have reason to know, have been admirably filled, and these I am led to believe have sustained the College in its lingering existence; for although the "Professor of Principles of Practice" says that "*the Faculty have never yet raised the question among themselves, as to the individual importance of its members,*" the profession, and even the pupils of the College, have very naturally and properly both "*raised the* question" and settled it too.

The Baltimore Journal quotes the polite expressions in Dr. Hullihen's Valedictory Address as good authority* for the usefulness or importance of the dental college. That address, I will merely say, was delivered at the invitation of the medical faculty, in their presence and that of their invited friends; and at a period when no other scheme for the education of dentists was under consideration; a passing compliment to the institution was but a civil return for that of inviting a gentleman unconnected with the College to become its organ in a valedictory to its pupils. The entire avoidance on *my part*, of any allusion, flattering or otherwise, to the school or its system, when placed under the same circumstances as Dr. Hullihen the year preceding, should,

*Not *very* good authority, when I recall the fact that its publication was suppressed, and it is the only Valedictory that ever was denied a place in the Baltimore Journal since the Dental College was commenced!

by the same rule and with equal propriety, be regarded as evidence that I did not approve of the scheme of dental colleges.

At any rate I am at liberty to say that Dr. Hullihen *is now, and has been from the first moment of my proposal, strongly in favor of establishing Professorships for Dental Surgery in Medical Colleges.*

The warm hearted Provost of the Baltimore College, Dr. E. Parmly, in his benevolent zeal for remedying the defects of dental education, has lent the benefit of his good name to aid that institution; but he has only visited it annually, at the period of its commencement, for the last five or six years, giving no time to the duties of instruction. Better evidence need not be sought in relation to his views of the education demanded for dentists, than the fact that while allowing his son and nephew (destined for dentists) to attend the Baltimore College of Dental Surgery, he caused the one to graduate an M. D. at the Washington Medical College of Baltimore, and is preparing the other for a similar degree in the anatomical schools of Paris.

We must look beyond the limited views of the Baltimore Journal, in order to determine the propriety and advantages, (not to *it*, but to the world) of incorporating the profession of dentist with its parent science of medicine; it is only thus that a correct ambition can be excited in men of the better and educated classes to join its ranks; it is only thus that the community will get the benefit of strong and cultivated minds applied to this branch of surgery.

It is but just to remark that the deficiencies I have been compelled reluctantly to refer to, as applicable to one Dental College, may not have equal force in reference to others that are differently organized, if there be such; but the main and general objection to these institutions, has seemed to me to be the sad consequences, present and prospective, that arise in the injurious separation of the dentist from the medical profession. It was in this spirit, and with regard to this serious objection, that my original proposition to have dental surgery taught in medical colleges, was published. I then made no needless reference to the inherent defects of the only Dental College with which I was acquainted.

It is no test of the two schemes proposed for dental education,

to assert that better dentists will be made under the one or the other. This is not the true question, nor could it well be determined until both plans had been fairly tried. In either case, whether dental college, or dental professor in medical college, much will of course depend upon the talents and characters respectively, of pupils and teachers. But the real and important subject for consideration is, whether the dentist, being, or aspiring to be, a member of the medical profession, should not have, in education, a similar origin, and undergo the same preparation as the medical man, in addition to what he requires for his particular speciality. I make no concession in saying that a dental college with *good* teachers, would produce better dentists than a medical college with incompetent professors of dental surgery; and the converse of this proposition is equally true.

The New York Medical College has already under consideration the establishment of a chair for Dentistry; and the New York Journal of Medicine, for February, contains an able paper from the pen of Dr. John Trenor, a distinguished dentist of that city, in which he condemns dental colleges as "*so decidedly inefficient, that they are a greater drawback to improvement than if they had never existed. They profess to remedy an evil which they most effectually and glaringly magnify.*" The chief sense in which I understand and apply this sweeping condemnation from an experienced dentist and medically educated man, is in the effects produced, directly and indirectly, upon the advancement of the profession, as a branch of medicine, and upon the class of men by whom it is to be represented. For whatever may have been the defects or difficulties, heretofore existing, in educating dentists, the profession itself was still regarded as a speciality of surgery, and belonging to medicine; and however poorly it may have been represented, it had not been severed by distinct corporate powers from its parent science, by titles or otherwise, until the Baltimore College of Dental Surgery came into existence.

In connection with this view, I may appropriately quote from Lord Bacon, who, without practical knowledge, has looked at the same subjects from the illuminated heights of his abstract wisdom:

"And in particular sciences we see, that if men fall to subdivide their

"their labors, as to be an oculist in physic, or to be perfect in some one "title of the law or the like, they may prove ready and subtile, but not "deep or sufficient—no, not in that subject to which they do particularly "attend, because of that concert which it hath with the rest. . . . . I "mean not that use which one science hath of another for *ornament*, "but I mean it *directly* of that use by way of supply of light and in- "formation, which the particulars and instances of one science do yield "and present for the framing or correcting of the axioms of another "science in their very truth and notion; . . . . for sciences distin- "guished have a dependence upon universal knowledge, to be augmented "and rectified by the superior light thereof; as well as the parts and "members of a science have upon the maxims of the same science, and "the mutual light and consent which one part receiveth of another; " . . . . and so one science greatly aiding to the invention and aug- "mentation of another. And therefore, without this intercourse, the "axioms of science will fall out to be neither full nor true; but will be "such opinions as Aristotle in some places doth wisely censure, when "when he saith, 'These are the opinions of persons that have respect "but to a few things.'"

"*Few things*" have, I fear, narrowed down to dollars and cents, in the modern separation of the sciences, no less than in the conducting of some *scientific* periodicals, which instead of being devoted to the advancement of learning, are only anxious to make money and exercise "a little brief authority."

Professor Thomas E. Bond says, in his excellent work on Dental Medicine, "*An oculist, unless a thorough physician, would be utterly unqualified to treat diseases of the eye;*" and surely this rule scarcely applies more strictly to the oculist than to the dentist, especially when we have under consideration the best mode of educating either.

Prof. Bond also remarks in the same work, that "the practice of dental surgery was long degraded, from causes precisely similar to those evil influences which depressed similar branches of the art. Disregarded by educated men, it necessarily fell into the hands of the ignorant and rude; and precisely as surgery and midwifery have gradually emerged from their barbarous state and attendant disrepute, dentistry is now winning its way, against all opposition, to its proper consideration."

Now as dentistry has been degraded by the *same causes*, should not the evil be remedied by the *same means?* The specialities of surgery and midwifery were never *separated* from *general medicine, either* by *distinct* or *independent schemes* of *education*, or

by *titles differing* from *those that* are *universal among medical men.* These specialities have reached the equality they enjoy with the other departments of the science *chiefly through the medium of professorships* in medical colleges devoted to them, and eventually through the character and general education of the men by whom they are represented.

Unfortunately I do not perceive that "dentistry *is* now winning its way to its proper consideration;" for although the number of its practitioners has greatly increased, with the sadly increasing need of them, those who best understand what really constitutes *good* dentists, seek in vain for the proof of the much talked of wonderful advance of dental surgery and dental literature. The London Medico-Chirurgical Journal of Practical Medicine,* noticing the pretensions of our noisy dental periodicals, has been severely and justly observant of the important distinction between true dental surgery, by which the health and preservation of the teeth are accomplished, and the modern mixture of mercantile and mechanical business in teeth, which characterises a great proportion of what is called dentistry in our country. The era in which we live has been prolific of improvement in the manufacture of teeth; but while this has been a valuable triumph in *honest* hands, for *art*, it has brought with it, I fear, a sad falling off, or increased difficulties to *science.* The readiness to sacrifice permanent utility to momentary show, is, perhaps, among the common errors of the times; it is a weakness natural to vanity and ignorance; and there really seems some danger, such is the almost universal display of white crockery in American mouths, both old and young, that we shall be nicknamed the nation of china-teeth. This comes from the facility and cheapness with which what are termed "*mechanical* dentists" supply sets of mineral teeth, and the great difficulty with which good surgeon-dentists are found, to preserve the natural teeth from disease. These causes seem to work like a two-edged sword, in destroying the luxury of sound and useful masticators. With so enormous a supply of mineral teeth, as are the subject of traffic in this country (the statistics are incredible), there must be a corresponding consumption; and the only convenient means of filling human mouths with such teeth, is to

* See Vol. 49, Am. repub.

empty them of the natural ones. The inference is painful; but I am disposed to think that the great increase in the demand for artificial teeth, or the extraordinary extent to which they are used, should be regarded as an evidence of the decline of dental surgery.

Unluckily we have other humbling proofs that our profession is not "winning its way against all opposition, to its proper consideration." We may see, for instance, in the leading journal of dental science, a *cold water cure* for *the exposed nerves* of teeth, from a correspondent who says he has discovered that the nerves of the human teeth are "*endowed with recuperative power.*" And from another favorite writer of the same journal we find a *serious recommendation of the use of a warming-pan for the gold foil, to regulate the temperature of the metal, before it is put into the cavity of a tooth!!!* This is *only* to be done in very cold weather, mind you, gentle reader.

The published discussions of certain dental societies, sometimes occupying nearly fifty pages of a periodical, may be referred to as painful evidence of the present condition of dental surgery, and the unfortunate influences (among which I am forced to include dental colleges,) under which the profession of dentist is fast assuming, or re-assuming the unintellectual character of a trade. These things obtain the sanction and the sympathy of the editor of the Dental Journal, who at the same time frowns down a contributor of sensible and scientific matter, at variance with his doctrines, in which he presumes to tell the plain truth to ignorance, and who will not submit to the dictatorial requirements which the conductor of a public journal has no right to make.

These are among the evils that call for cure by a different and better system of education for the dentist, and which, I believe, will not be remedied until he is required to be a medical man, in the true sense of the term, identified, in the source and character of his knowledge, with the profession of medicine. Then, and not till then, may we hope to see that fellowship and free communion of thought, calculated to advance the science, between the members of the profession generally, and which is now clamored for by two distinct classes of dentists: first, by the artful and unworthy, who desire to benefit their business or

borrow good character, which they will not earn; and next, by the amiable and philanthropic, who do not see into the designs of the cunning, and lend themselves, their means and reputations, thinking to advance the interests of the profession itself, by their intercourse with ignorant and unblushing pretenders. No such result, I need scarcely say, can be hoped for; and when the Journal argues that those who keep aloof from such association, are ashamed of their profession, or deem the name of dentist a reproach, he should rather infer that they only blushed for its representatives—men of "modest assurance," who open their offices, after little or no legitimate preparation, and at once call upon all in "*the same line of business*," with no other introduction than their own desire for "*professional reciprocity*"!

I cannot regard these general remarks, though incidental, as digressive from the question of dental education, or the scheme of Professorships in medical colleges, for its elevation and advancement. The gloss and deceptions thrown over the real character and condition of the dentist in this country, by a parade of trashy matter under empty titles, is the lamentable result of recent and present combinations, which have been ostensibly for the *improvement* of dental surgery, and it has, perhaps, derived a little unmeaning glory with the uninformed; but the chief and only solid advantage has been the pecuniary profits to those who, under this system, have been enabled to sell poor goods at a high price. One of the graduates of a dental college being asked by an examiner, "*What are the leading considerations or inducements for extracting the human teeth?* answered, "*I suppose, Sir, to make money*"! but where he got this lesson let others decide.

In conclusion, it seems to me to be a wide spread opinion among well informed professional men, that every student wishing to be an educated dentist, must study medicine thoroughly, and graduate as a medical man; but it by no means follows that we should expect all medical students to fit themselves for the speciality of the dentist, supposing a chair of dental surgery to exist in every medical school in the country. I am by no means for making dentists of all the doctors, but only for having medicine the basis of every dentist's education. Hence a professorship for dental surgery, attached to a medical college, need not

necessarily embarrass or interfere with the chairs already established, and which are confessedly quite numerous enough. Those graduates who designed becoming dentists, would perhaps devote a third course to this branch, and it would rest with the professor who directed their studies and preparations for practice, to furnish the means of clinics, &c., in which to accomplish themselves in whatever is required. There are details in respect to which he who is called upon to fulfil the duties of a new chair, will of course find some difficulties at first; but they will be as readily overcome in medical, as they professedly have been in dental colleges.

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*On the Reparative Power of the Spinal Cord after complete division.* By E. Brown-Sequard, M. D., of Paris.

I have performed a large number of experiments, with the view of determining the degree of curability of wounds of the spinal marrow. When I began these researches, I believed, with every physician, that exposure of the spinal cord to the action of the air, was an extremely dangerous operation. I had read and accepted as true, the following assertion of Dr. Longet: "All the experimenters who have had an opportunity of opening the vertebral canal on adult animals of the higher classes, ought to know, that as soon as the medulla spinalis, *even when surrounded by its liquid and by the dura mater*, has been laid bare, in the lumbar region, the nervous action becomes so much enfeebled, that the animals are unable to keep themselves on their legs, which at the same time appear to be quite insensible. Suddenly, after the dura-mater has been cut, and the cerebro-spinal liquid has escaped through the wound, the state of the animal becomes worse; it falls down, struck by paralysis, and the posterior extremities may be cut without exciting the least appearance of pain."*

I have found that this description of phenomena is true only in certain cases, and in certain animals, (as the dog.) When the operation is performed slowly, and so as to give much pain to the animal, and produce a considerable hemorrhage, then it happens that an appearance of palsy follows the laying bare of

* Traité d'Anat. et de Physiol. du Syst. Nerv. 1842. T. 1, p. 276.

the cord; but, even in that case, if the animal is left quiet for a short time, it recovers, and sensibility, together with voluntary motion, return in its hind limbs.

When the operation is performed upon cats, sheep and guinea-pigs, there is usually no appearance of palsy; but when it is greatly prolonged, it happens sometimes that, in consequence of the extreme exhaustion produced by the hemorrhage, and by excess of pain, the animal becomes apparently paralysed, even before the spinal canal has been opened, so that it is not the action of air on the spinal marrow which causes the apparent palsy.

My experiments have gone so far as to prove that mammals may not only have no appearance of palsy, after opening their spinal canal, but that they are able to live long and apparently in very good health after their medulla spinalis has been exposed to the action of the air. I have seen guinea-pigs living very well after I had taken out eight or ten posterior arches of the lumbar and sacral vertebræ. There has been only a slight disturbance in the movements of the posterior limbs of these animals, and that disturbance, very probably, was in consequence of the excision of the muscles inserted upon the vertebral column.

After having stated the innocuity of the action of air on the spinal marrow, I have tried experiments on wounds of that organ.

It is known that there are clinical observations proving that the injuries of the spinal cord are not constantly followed by death, and that the paraplegia which is the result of these wounds may disappear more or less completely; but there is no observation proving the possibility of an entire curation, *i. e.*, of a full return of sensibility and of voluntary motion after the complete transverse section of the spinal cord. The celebrated experiments of Arnemann, Flourens, Ollivier (d'Angers) and Jobert (de Lamballe) have left the question of the possibility of recovery after complete transverse section of the medulla spinalis heretofore unsettled.

My first experiments, made upon pigeons, had shown me an incipient return of the lost functions some months after the complete section of the spinal cord.* I afterwards saw five

* Gaz. Médic. de Paris. 1849, p. 232.

pigeons, upon which such a section had been made, gaining little by little, and at last entirely, both sensibility and voluntary motion. I have not been able to examine the spinal marrow of all these pigeons; but upon three of them the most careful microscopical examination of the injured cord has been made. One of these three animals had been operated upon eighteen months before the anatomical examination. The history of this pigeon is very interesting. Its spinal cord was *entirely divided* transversely between the fifth and sixth costal vertebræ. The operation was followed by complete paralysis of the posterior part of the body, both as regarded sensibility and voluntary motion. At the end of three months, voluntary movements began to show themselves, in connection with reflex actions; and sensibility appeared to exist anew. These powers gradually augmented; and six months after the operation, the bird could stand for some minutes, but fell as soon as it attempted to walk. In the course of the seventh month it began to walk, but unsteadily, helping itself constantly with its wings. By the end of the eighth month, it could walk slowly without support; but if it attempted to walk fast, it fell over, unless it supported itself with its wings. When it was walking a little faster than usual, it loosened its wings a little, so as to be ready to prevent itself from falling. The beginning of the thirteenth month, it could run. Fifteen months after the operation, its progression seemed in all respects normal, save that a certain degree of stiffness remained in its gait. The generative function also, which had been entirely destroyed by the operation, was completely restored. It was a male.

My friend, Dr. Ch. Robin, assisted me in the autopsy of that pigeon. We found a bundle of cellular fibres uniting the dura mater to a part of the spinal cord where a whitish, opaque circular line existed. At that place the cord was somewhat contracted, its transverse diameter being smaller than elsewhere. A very fine longitudinal slice of the cord taken from the place of contraction, and examined with the microscope, showed us a great number of normal double and single-edged nervous tubes. There was nothing peculiar in that cicatrix, except: 1st, that the nerve-fibres exhibited, to a greater degree than usual, those varicosities which are found in nerve-fibres of the soft parts of the brain and of the cerebral nerves; 2d, that the nervous

corpuscles, instead of being only in the central part of the cord, were scattered everywhere amidst the nerve-tubes.

In two other cases, the microscopical examination having been made by my friends Dr. Lebert and Dr. Follin, we found a like reunion of the nervous fibres of the cord.

In several guinea-pigs, in which I had made the section through only one half of the spinal cord, an incomplete return of voluntary power was observed within seven or eight months after the operation. In the case of one of these, a guinea-pig which had been subjected to this operation the year before, and in which sensibility appeared to have been completely restored, and voluntary movement less completely, I made, with my friend M. Laboulbère, a careful examination of the injured part. We found that the section had traversed both the posterior columns, as well the anterior and lateral columns, and a portion of the grey substance on the right side, all of which parts exhibited a sort of contraction, the continuity of the divided parts being re-established by a whitish opaque cicatrix. On examining the substance of this cicatrix, we found it in part made up of fibres of areolar tissue, the direction of which was transverse or very slightly oblique. These cellular fibres were crossed by great numbers of normal double-edged nerve-fibres running in a longitudinal direction. The nerve-fibres were found uninterruptedly continuous not only through the whole extent of the cicatrix, but also before and behind. There were a small number of nerve-corpuscles scattered between the nerve and areolar fibres.

From these researches I draw the following conclusions:

1st, That the spinal marrow, even in adult mammalia, may be exposed to the action of the air without danger to the life of the animal.

2d, That wounds of the spinal marrow may be repaired.

3d, That after a complete transverse section of the spinal cord, the functions of that organ may be entirely restored.

# CLINICAL REPORTS.

*Clinic of the Jefferson Medical College. Service of* PROFESSOR DUNGLISON.

(Reported by J. AITKEN MEIGS, M. D.)

[Continued from p. 331.]

CASE III. The next case to which we call your attention aptly illustrates the physiological dependence of the various organs of the economy upon each other, and the reciprocal action which they consequently exert.

We have elsewhere considered, somewhat in detail, the highly interesting subject of functional correlation. The harmony which so strikingly characterises the different actions of the human system, while in the healthy condition, we have seen to be the result of peculiar combinations of the two great sets of functions. The various correlations or combinations of these functions, are replete with interest to the physiologist; but it is not until they are applied as guides in the elucidation of pathological phenomena, that their real magnitude and importance become evident. The disturbing influence of disease, not unfrequently reveals to us an intimacy of connection, between certain portions of the body,—of which we had previously not the slightest conception. Hence we are occasionally called upon to observe how an apparently trifling derangement of one organ may be reflected, as it were, upon another; and with such force, moreover, as to light up in the latter a morbid action whose intensity and virulence, are with difficulty controlled. The latter of these abnormal actions being the stronger of the two, sometimes so masks the former, as to render the detection of the true cause of the mischief, and the formation of a correct diagnosis, extremely difficult.

In the patient whose symptoms we are about briefly to investigate in your presence, this principle is so prominently exemplified, that on account of this feature alone, we have been induced to bring him before you for examination and study; although his

disease, in its general characters, differs but little, if at all, from the two preceding cases.

Mr. R. æt. 40, is very much troubled with violent pain in the heart, coming on at intervals, and accompanied with strong palpitation. He is not only incapable of prolonged exertion, in consequence of the annoying and dangerous impetus given thereby to the heart's action, but is compelled to avoid all unusual exercise, however temporary in duration, so that in ascending a flight of stairs at an accelerated pace, he is frequently obliged to stop and seize upon the bannisters for support. Notwithstanding these symptoms, however, auscultation shows no departure from the ordinary, healthy, cardiac sounds; a slight diminution in power, only, can be detected. The impulse is somewhat weakened.

He has never been affected with rheumatism.

There is tenderness at the epigastric centre; and he complains, furthermore, of a sensation of nausea, coming on shortly after each meal,—especially is this the case after the ingestion of fatty substances. The bowels are obstinately constipated.

Gastric disturbance was the first symptom of disordered health that attracted the notice of the patient. Soon the small intestines, and finally the entire alimentary track, became implicated. That the stomach is still in an unhealthy condition, is shown by the tenderness manifested when pressure is made over that organ. Physiology teaches us that fatty substances undergo no action in the stomach; but in the duodenum, form with the alkalies furnished by the bile and pancreatic juice, an emulsion which is gradually absorbed. Now, as you have already heard, the patient suffers most while in the act of digesting fatty or oily matters taken with his food. The application of a physiological fact, thus furnishes us, in this case, with proof that the small intestines are involved in the same morbid action. The extreme costiveness is a sufficient indication of a highly torpid condition of the colon.

We have here to contend, then, with two sets of symptoms: the one affecting the digestive apparatus, and arising mainly, perhaps, from faulty innervation of the intestinal tube; the other, affecting the heart, and dependent for existence on the former. To the first probably belongs the priority, in point of occurrence, and to it we must principally direct our treatment.

We have, thus, a well-defined example of an unhealthy action,

originating in the digestive apparatus, steadily increasing in intensity to a certain point, and then suddenly reflected upon the circulatory system to the manifest disturbance of the whole economy. So, too, in hysterical females, we are often called upon to combat symptoms of functional derangement of the heart, evidently resulting from some uterine affection.

The indications for treatment in this case are very simple. We must obviate constipation—itself no trifling auxiliary in the production of heart disease—and develope the nervous sensibility of the intestinal canal. By arousing the digestive tube from its lethargy, we are in hopes that the cardiac symptoms,—which are the results of this lethargy,—will disappear as the cause is removed, and without further trouble.

We shall direct the following prescription, in which are combined a tonic and a saline cathartic, as in the Cheltenham water; and which, under a protracted use, is as well adapted for developing the sensibility of the intestinal tube, as any combination with which I am acquainted.

| ℞. | Magnesiæ Sulphat. | ℥j. |
|---|---|---|
| | Potassæ Bitart. | ʒj. |
| | Ferri Sulphat. | ℈ss. |
| | Aquæ | Oj. |

M. A wine-glassful to be taken every morning before breakfast.

He will make use of an animal diet, and, in general terms, his food should be plain, nutritious and easy of digestion. Such articles as tea and coffee, fresh bread, the succulent vegetables, pastry, &c., or, in short, whatever he has known to disagree with him, must be carefully avoided.

Constrasting strongly with the cases which have just occupied our attention are the two which we now bring before you for examination and study. They are excellent examples of organic cardiac disease. In the one case there is hypertrophy of the left ventricle, with mitral regurgitation; in the other, hypertrophy of the same ventricle with, perhaps, semilunar regurgitation.

Let us consider them separately.

Case V. Mr. C——, æt. 40, of a robust, plethoric habit, and sanguine temperament, has been kind enough to present

himself here, that his case may be investigated in your presence. About six weeks ago, he began to be aware of a sensation of unusual heat and tension behind the sternum, accompanied with an increase in the frequency and force of the heart's action. The impulse is daily becoming more violent and troublesome; and he is beginning to suffer from dyspnœa, especially when the action of the heart is hurried by mental excitement or undue exertion.

Auscultation betrays a highly exaggerated impulse, with great obscurity of the cardial sounds,—so great indeed as to require close attention to distinguish them. Moreover, if you listen attentively, you will hear, synchronously with the systole of the heart, a rough, blowing sound—the "*bruit de souffle ou de soufflet*" of the French,—the "blowing or bellows-murmur" of the English writers. Now, this is an abnormous sound, demanding an inquiry into the accompanying phenomena; for although not always of absolutely dangerous import, it is generally indicative of some structural lesion of the interior of the organ. The abnormal or exocardial heart-sounds, which are the consequence of morbid alterations exterior to the organ, are more or less frictional in character, and hence are usually readily distinguished from the endocardial, which are 'blowing.'

Endocardial sounds, or, to give them their generic title, "bellows sounds or murmurs," are the result of vibrations caused by columns of blood in their passage through the heart; and you may comprehend that whatever has a tendency to affect these sanguineous currents, and change the healthy vibrations, may be the cause of such murmurs. Hence "blowing sounds" are frequently heard in anæmic persons—as in chlorotic females. Loss of blood may also occasion these murmurs; and accordingly they are heard in persons exhausted and prostrated by hemorrhage.

In the majority of cases, however, in which the bellows sound occurs, it is symptomatic of morbid alteration of the valvular apparatus of the heart. Thus there may be fibrinous deposits upon and around the valves; they may become cartilaginous, or ossified, or covered with warty excrescences, &c., giving rise to the different modifications or varieties of the murmur, known by the epithets *rasping*, *filing*, *sawing*, &c.

The general phenomena of this case lead to the inference, that

there is valvular disease; and we must, accordingly, push our investigations further, in order to learn the seat of the mischief—whether it be at the aortic orifice, in the valves of the pulmonary artery, in the mitral or tricuspid valves, or in the auriculo-ventricular openings.

A little reflection will exhibit, that this can be approximated by ascertaining the exact spot in the præcordial region where the sound is heard the loudest, the direction in which it is transmitted farthest, and the time of occurrence, as compared with the systole or diastole of the heart.

Now, in derangement of the semi-lunar valves, the endocardial murmur is most distinctly heard near the third costal cartilage. When those of the aorta are in fault, the sound is transmitted upwards between the second and third ribs of the right side, following the course of the aorta; and when those of the pulmonary artery are affected, the sound extends to the left side, following the route of that artery. The place in which the murmur is heard, then, and the direction in which it is carried, furnishes us with the elements of diagnosis as to the valves specially implicated.

[This was elucidated by a diagram of a section of the heart figured on the black board.]

In this patient the murmur is heard much more loudly below and somewhat to the right of the left nipple, than at any other portion of the cardiac region, and is distinctly prolonged towards the apex of the organ.

In consideration of the aids thus afforded by auscultation, we have no hesitation, then, in concluding that we have here to contend with disease of the mitral valve. The tricuspid murmur to be sure, is heard loudest at about the same spot; but it is not so markedly directed towards the apex of the heart; and furthermore the pulse is generally not so much affected, and according to some, there is no accompanying "*fremissement cataire*" or purring-of-cat sound,—phenomena, which are the reverse of those presented here.

Case IV. David F——, æt. 35; colored; formerly a fisherman, now a bar-tender; has had symptoms of heart disease for the last five years. He complains of severe pain at the præ-

cordium, and is much disturbed by the palpitation and turbulent movements of his heart. The dulness on percussing the region of the heart is greater and more extended than usual; and to the ear of the ausculter is conveyed a clear and distinct bellows murmur, immediately following the impulse. The impulse is exceedingly strong and powerful; so forcible, indeed, that the head, in ausculting his chest, is seen by the class to be elevated by each systolic effort.

The pulse is very strong, not hurried, but having the jerking character which so often accompanies endocardial affections.

The strength and undue diffusion of the impulse, coupled with diminished clearness of the systolic sound,—facts presented by the case in consideration,—are indications of a hypertrophic condition of the left ventricle. Hypertrophy of the ventricles is a very common accompaniment of valvular disease. It is frequently, indeed, the effect of the difficult transmission of blood, owing to morbid changes in the valves; and the blowing murmur, in this instance, shows us that we have to contend with the complication in question.

The character of the pulse, the location of the bellows sound, and the concomitant symptoms, induce in our mind the belief that there is some deposition upon or imperfection of the semilunar valves at the mouth of the aorta, thus permitting a portion of the blood, after every contraction of the ventricle, to regurgitate from the aorta. Yet, contrary to the usual rule in these cases, which has been referred to in the course of this lecture, we have the sound transmitted in the direction of, and heard most strongly over the apex of the heart, instead of at its base. This anomaly complicates the diagnosis as to the nature and seat of the cardiac lesion; and we might be induced to consider the mitral valve in fault. But if such were the case, how could we explain the bellows sound occurring so distinctly after the impulse, and taking the place of the ordinary second sound of the heart? The phenomena appeared at first sight to sanction the view mentioned by some, that the impulse is synchronous with the first stage of the diastole of the organ, or with what they consider the contraction of the auricles; but the synchronous occurrence of the impulse and of the pulse at the wrist is a fatal objection to this view, inasmuch as the latter phenomenon—the

pulse—is unquestionably produced by the systolic impulse on the column of blood contained in the arterial vessels. Moreover, as was explained to you elsewhere, there is but a slight action of the auricles during the first stage of ventricular dilatation; the real contraction of their muscular parietes being concerned in sending the last portions of blood into the ventricles at the termination of the interval of repose, and this auricular contraction being rapidly propagated through the muscular structure of the ventricles to the apex of the heart; so that the auricular and the ventricular systole form part, as it were, of but one movement, so progressively and intimately are they associated; and hence we can understand the common combination of hypertrophy of the auricles with hypertrophy of the ventricles.

[Here the physiology of a series of the heart's actions was explained by a diagram on the black board.]

In the case before us it will be borne in mind, that the bellows murmur was as distinctly succeeding to, and separable from the impulse of the heart against the chest, as is the normal second sound from the first sound of the organ. If, therefore, the impulse is occasioned by the combined auriculo-ventricular contraction, as it would seem to be, although the matter cannot be regarded as demonstrated, then the bellows murmur in this case must be owing either to the regurgitation of the blood through the aortic semilunar valves, or to some disease of the mitral valves, which obstructs the regular course of the blood from the auricle into the ventricle; and the fact that the sound is more distinctly heard as the ear approaches the apex, is confirmatory of this view of the subject. If, however, so much morbid alteration of the mitral valve is present as to account for the phenomena, it is not easy to understand, why, during the systole of the organ, there should not be decided physical evidences of mitral regurgitation; and, on the other hand, if the morbid change be in the semilunar valves of the aorta, the only hypothesis we can suggest for the murmur being more distinctly heard near the apex than the base of the heart is the existence of physical circumstances in the special formation of the chest, that may, in some manner, modify the ordinary transmission of the physical signs to the ear of the observer.

As to the therapeutics of these two cases, and indeed of all

organic affections of the heart, obviously but little can be done. They are structural changes, which cannot be reached by any system of medication. Certainly, in the whole domain of materia medica, we cannot find an article which exerts a positively curative influence upon the diseased structure; and we are consequently obliged to fall back upon general principles, which, although palliative in character, are oftentimes found to be productive of no little good. When within certain limits, such disease is not always speedily or necessarily fatal, and life may often be prolonged with comparatively little discomfort, by a judicious regulation of the habits and circumstances of the patient.

The great and troublesome palpitation in the first case, we shall endeavor to ameliorate by the exhibition of tinctura digitalis, given to the extent of twenty or thirty drops in the course of the day, carefully watching its operation, and arresting it when its sedative agency is exerted beyond the necessary extent. In the other case, we shall make use of no medicine whatever, but depend upon an exclusively hygienic treatment. Both patients we shall direct to live with the utmost abstinence, taking readily digestible food in quantity merely sufficient to support life. They must avoid stimuli of all kinds; observe strictly the antiphlogistic regimen; and maintain, at all times, quietude of mind and body, as far as this is practicable. In taking exercise care must be had to avoid every cause of undue excitement. They should not run, nor walk rapidly, nor climb steep ascents, nor lift heavy weights, nor, in short, make use of any unusual effort. Attention should also be directed to the digestive organs, derangement of which so constantly reacts on the cardiac functions. Nothing further shall be done at present than to direct them, in common with the others, to return a week hence, and report progress.

# THE MEDICAL EXAMINER.

PHILADELPHIA, JUNE, 1852.

EDITORIAL COURTESY.

The editors of the Stethoscope, published at Richmond, Virginia, and the New Jersey Medical and Surgical Reporter, will please accept our thanks for their kindness in sending us proof sheets of the proceedings of the American Medical Association. Such courtesies are the more grateful from their rarity in these days of selfishness. We trust it may be in our power to reciprocate them.

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Dr. Brown-Sequard, of Paris, has commenced a course of lectures on Experimental Physiology, in this city, which promises to be highly instructive and interesting. His lectures are illustrated by vivisections, and are intended to establish facts and theories in relation to electro-physiology, and the physiology of the nervous system and of the muscular tissue.

The name of Dr. Brown-Sequard is well known to all who have watched the progress of physiology during the last few years, as an able and enthusiastic cultivator of this department of medical science.

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Our foreign and domestic retrospect, together with several bibliographical notices, and other matters prepared for this number, are unavoidably postponed to make room for the reports of the American Medical Association, and of the Pennsylvania State Medical Society. They will appear in the July number.

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Dr. John Neill has been appointed Surgeon to the Pennsylvania Hospital. The hospital staff now consists of four surgeons and three physicians.

# MEDICAL NEWS.

## AMERICAN MEDICAL ASSOCIATION:

*Abstract of Proceedings of its late meeting held at Richmond, Va., May 4, 1852.*

[From the New Jersey Medical and Surgical Reporter.]

The Association met in the Second Presbyterian Church, at 11 o'clock. The President, Dr. Moultrie, of Charleston, S. C., in the chair.

Dr. James Beale, Chairman of the Committee of Reception, welcomed the delegates to the city of Richmond.

Dr. Haxall, Chairman of Committee of Arrangements, read a list of the delegates who were present, and registered.

Dr. Hays, of Pa., offered the following resolution :—

*Resolved*, That a committee of one from each State, to be selected by its delegation, be appointed to nominate suitable officers for the Association.

The resolution having been adopted, a recess of ten minutes was taken, to allow the delegations opportunity to appoint the Nominating Committee.

At the expiration of the recess the President announced the following committee.

*Nominating Committee.*

| | | | |
|---|---|---|---|
| Isaac Lincoln, | *Maine.* | J. H. Dickson, | *N. C.* |
| Jeremiah Blake, | *N. H.* | H. R. Frost, | *S. C.* |
| Jacob Bigelow, | *Mass.* | C. B. Nottingham, | *Geo.* |
| H. W. Rivers, | *R.I.* | A. Lopez, | *Ala.* |
| Chas. Hooker, | *Conn.* | W. L. Sutton, | *Ky.* |
| Jos. M. Smith, | *N.Y.* | C. A. Pope, | *Mo.* |
| G. R. Chetwood, | *N.J.* | D. Tilden, | *Ohio.* |
| G. W. Norris, | *Penn.* | D. Brainard, | *Ill.* |
| H. T. Askew, | *Del.* | Z. Pitcher, | *Mich.* |
| G. S. Gibson, | *Md.* | J. H. Rauch, | *Iowa.* |
| C. Boyle, | *D. C.* | Paul T. Eve, | *Tenn.* |
| James Beale, | *Va.* | | |

After the calling of the Roll the President delivered the Annual Address.

The Nominating Committee then reported the following gentlemen officers of the Association for the present year.

*For President*—Beverlly R. Welford, M. D. of Va.

*For Vice Presidents*—Jonathan Knight, M. D,. of Conn., James W. Thomson, M. D., of Del, Thos. S. Simons, M. D., of S. C., Chas. A. Pope, M. D., of Missouri.

*For Treasurer*—D. Francis Condie, M. D. of Pa.

The officers thus nominated were duly elected, and the committee requested to nominate Secretaries, and to decide upon the next place of meeting.

On motion, Drs. John L. Atlee, of Pa., Haxall, of Va., and Eve of Tenn., were appointed a committee to wait upon Dr. Wellford, and announce his election, and conduct him to the chair. Dr. Wellford having taken the chair returned his thanks for the honor conferred upon him.

Dr. Haxall, of Va., offered the following preamble and resolution, which were unanimously adopted:—

"The American Medical Society in Paris being so constituted, that it would be entitled to representation if it existed in this country, and as it is recognized abroad as an American institution;

"*Resolved*, That the delegates accredited to the Association by the American Medical Society in Paris, be, and are hereby invited to take seats in this body."

Dr. Paul Lajus offered the following resolution, which was adopted:

*Resolved*, That Dr. Brown-Sequard of Paris be invited to occupy a seat among the delegates at the present meeting of the Association.

Dr. Isaac Hays read the Report of the Committee on Publication, and the Report of the Treasurer. They were received, and the following resolutions appended to the report of the Committee of Publication were unanimously adopted.

*Resolved*, That the assessment for the present year be three dollars.

*Resolved*, That the Committee of Publication be authorized to fix the price at which the Transactions for the present year will be furnished to such of the members of the Association as shall remit the amount decided upon by the committee within a specified time (to be fixed by them.) And that it shall be the duty of the said committee, to issue a circular, informing the members of the terms upon which the transactions will be furnished them.

*Resolved*, That the Committee be further authorized to take such measures in the disposal of the copies of the Transactions, remaining after all such members are supplied as shall comply with the terms set forth in the circular of the Committee, as they may deem expedient.

Dr. Hayward presented the report from the Committee on Prize Essays, and broke the seal of the packet, containing the name of the author of the essay entitled, "*On Variations of Pitch in Percussion and Respiratory Sounds and their application to Physical Diagnosis*," which was deemed worthy of the prize. The author proved to be Dr. Austin Flint, of Buffalo, N. Y., to whom the prize was awarded, and the report referred to the Committee of Publication.

The Report of the Committee on the Medical Botany of the U. S. for 1850-51 from Dr. A. Clapp, Conn., was presented and referred to the Committee of Publication.

Dr. R. W. Haxall, of Va., read a short report of the progress of the Committee on the Epidemics of Virginia and North Carolina, and asked to be continued; which request was granted.

On motion of Dr. Gooch, the Editorial Corps were invited to take seats on the floor.

The Secretary stated that he had transmitted copies of the preamble and resolutions of 1850–51, relative to assimilated rank of the medical staff of the army and navy, to the several departments ordered by the

resolutions, and that the chief of the Bureau of Medicine and Surgery at Washington, had approved the course recommended by the Association in a letter which was read. Dr. Pinkney, of the Navy, asked leave to read a memorial, which he had prepared to present to Congress on this subject, and which he sustained in a lengthened and forcible speech—after which Dr. Cox, of Md., offered resolutions expressive of the approval of the Association in the matter, &c. &c.—which resolutions were referred to a special committee.

Dr. Simons, of S. C., offered the following resolutions:

*Resolved*, That the American Medical Association do memorialize Congress to require all vessels bringing steerage passengers over to have a surgeon on board.

*Resolved*, That a committee of this Association be appointed to draw up a memorial to Congress, making such suggestions as they may deem fit as regards the importance of this measure.

The report of the Committee upon the Constitution, being the special order—Dr. Hays, chairman of the Committee, made a Report. Dr. T. . Yardley, a member of the committee, presented a counter-report. Much discussion ensued, and many resolutions and amendments were proposed, and withdrawn in favor of the following resolution, offered by Dr. Thomas, of Md., and amended by Dr. Stewart of N. Y.

*Resolved*, That the two Reports, on proposed alterations of the Constitution, be referred to a committee of three, to be appointed by the chair, with instructions to report to-morrow morning in definite and proper form, such amendments as will embrace the views set forth in the reports, and such other views as may appear to them advisable.

The resolution was adopted.

The Secretary read the following communication from the New York Academy of Medicine, which on motion was referred to the publishing committee, and ordered to be printed.

NEW YORK ACADEMY OF MEDICINE,
NEW YORK, *April*, 22, 1851.

SIR: I have the honor to transmit to you a copy of the preamble and resolutions adopted at a regular meeting of the New York Academy of Medicine, held April 21, 1852.

*Whereas*, The clinics, now held at the medical colleges, as at present conducted, are, or may be made tributary to the private interests of the professors, at the expense of other and younger members of the profession—depriving them, by an odious monopoly, of practice and operations, and often of *fees* to which they are justly entitled,

*Therefore, Resolved*, As the sense of this Academy, that to prescribe or practice upon the legitimate patients of any other physician, knowing them to be such, although done gratuitously at a clinic, is equally unwarrantable and unprofessional, with similar interference with the patients of another in private practice, and in either case is a violation of the code of medical ethics, adopted by this body.

*Resolved*, That the possible perversion of these clinics, to the private emolument of those conducting them, by transferring patients to their

private offices, and then exacting fees from those found able to pay, divests the clinics of all pretext for professing to be public charities, and should be scrupulously guarded against in all our colleges by stringent rules.

*Resolved*, That a copy of these resolutions be sent to the authorities of the several medical colleges in this city.

The Secretary was also instructed to forward a copy of these resolutions to the American Medical Association.

Respectfully yours,

JACKSON BALTON, M. D., *Recording Secretary.*

Dr. Eve, from the committee on nominations, recommended the following additional officers for the ensuing year:—

*For Secretaries*—Drs. P. Claiborne Gooch, of Va., and Edw. L. Beadle, of N. Y.

*Committee of Publication*—Drs. D. F. Condie, of Pa., Isaac Hays, of Pa., P. C. Gooch, of Va., E. L. Beadle, of N. Y., Isaac Parrish, of Pa., G. Emerson, of Pa., G. W. Norris, of Pa.

*Committee of Arrangements*—Drs. F. Campbell Stewart, of N. Y., John Watson, of N. Y., Wm. Rockwell of N. Y., James R. Wood, of N. Y., Robt. Watts, Jr., N. Y., Alfred Post, of N. Y., John G. Adams, of N. Y., H. D. Bulkley, of N. Y.,

On motion, the Report was received, and the gentlemen named were unanimously elected officers of the Association.

The Report of the Committee on "The Blending and Conversion of the Types of Fever," was next read by Dr. C. B. Williman, S. C. (in place of Dr. Dickson, not present,) and referred to the Committee of Publication.

Dr. Hayward, of Mass., presented and read a Report upon the Radical Cure of Hernia, which was also referred to the Publishing Committee.

Dr. Greene, N. Y., offered the following resolutions:—

*Resolved*, That at all future meetings of this Association, the reports of Committees and all contributions on scientific subjects, occupying more than ten pages of quarto post manuscript, be accompanied each by an abstract or synopsis embracing the principal points of such report or paper, which abstract or synopsis may be read before the Association.

*Resolved*, That the above resolution be transmitted to the Chairman of each Committee.

The thanks of the Association were presented to the physicians and citizens of Virginia, to the Trustees of the Second Presbyterian Church, to the Committee of Arrangements, and to the Managers of the Danville Railroad Company, for their kindness and attention to its members.

The following committee was appointed to report what action this Association should take in order to procure, for distribution among the medical profession of the United States, a large edition of the medical statistics of the country, as furnished by the late census, viz.: Drs. Simons, of S. C., S. Boyle, of D. C., Summer, of Conn.

The following Committee was appointed to report on the relation between climate and pulmonary consumption, viz.: Drs. D. F. Condie, R. E. Rodgers, James M. Smith, Moultrie, and McGuire.

On motion of Dr. Rockwell, it was *Resolved*, That the Committee to memorialize Congress on the subject of compelling passenger vessels to carry surgeons, be directed also to call their attention to the importance of giving to each steerage passenger a certain amount of space between decks.

The Nominating Committee reported the following special committees:—

D. F. Condie, Philadelphia, Causes of Tubercular Disease.

James Jones, New Orleans, The Mutual Relations of Yellow and Bilious Remittent fevers.

R. S. Homes, St. Louis, Missouri, Epidemic Erysipelas.

Charles D. Meigs, Philadelphia, Acute and Chronic Diseases of the Neck of the Uterus.

J. P. Jervey, Charleston, South Carolina, Dengue.

Daniel Drake, Cincinnati, Milk sickness, so called.

Dr. Lopez, Mobile, Prevalence of Idiopathic Tetanus.

George B. Wood, Philadelphia, Diseases of Parasitic Origin.

R. D. Arnold, Savannah, the Physiological Peculiarities and Diseases of Negroes.

Joseph Carson, Philadelphia, Alkaloids which may be substituted for Quinia.

S. D. Gross, Louisville, Ky., Results of Surgical Operations for the relief of Malignant Diseases.

James R. Wood, New York, Statistics of the Operation for the Removal of Stone in the Bladder.

Alexander H. Stevens, New York, Sanitary Principles applicable to the Construction of Dwellings.

G. Emerson, Philadelphia, Agency for the Refrigeration produced through Upward Radiation of Heat, as an Exciting Cause of Disease.

Henry J. Bigelow, Boston, The best Means of Making Pressure in Reducible Hernia.

A. T. B. Merrit, Richmond, Cholera and its Relations to Congestive Fever; their Analogy or Identity.

Ushur Parsons, Providence, R. I., Displacement of the Uterus.

H. F. Campbell, Agusta, Ga., Typhoid Fever.

Worthington Hooker, Connecticut, Epidemics of New England and New York.

Jno. L. Atlee, Lancaster, Pa., Epidemics of New Jersey, Pennsylvania, Delaware, and Maryland.

R. W. Haxall, Richmond, Va., Epidemics of Virginia and North Carolina.

William M. Bolling, Montgomery, Ala., Epidemics of South Carolina, Georgia, Florida, and Alabama.

Edward H. Barton, New Orleans, Epidemics of Mississippi, Louisiana, Texas, and Arkansas.

Dr. Sutton, Georgetown, Ky., Epidemics of Tennessee and Kentucky.

Thomas Reyburn, St. Louis, Mo., Epidemics of Missouri, Illinois, Iowa, and Wisconsin.

George Mendenhall, Cincinnati, Ohio, Epidemics of Ohio, Indiana and Michigan.

*Committee on Volunteer Communications.*

Joseph M. Smith,
Jno. A. Swett,
Willlard Parker,
Gurdon Buck,
Alfred C. Post,
} all of New York.

The titles of the Reports on Epidemics and other special reports were read, and the Reports referred to the Committee on Publication.

The subject of altering several important provisions of the constitution presented in a majority and minority report, and both submitted by different portions of a committee, to whom the subject was referred last year, claimed a considerable share of attention in the Association, and much interesting discussion ensued in which some of the most distinguished men of our profession participated; and the Committe who were charged with condensing the subjects of both reports into one, so far as they could be made compatible with each other, presented a series of well-digested propositions, which, after free discussion and some alterations, were laid on the table till next year, then to be taken up and finally acted upon. These propositions embrace the absorbing question of delegation, and present a conservative policy, which may probably be adopted, as it is evident the Association is not yet fully prepared to exclude the schools from a representation at its meetings.

The Committee suggest that delegates shall be appointed for one year, that they shall hold their appointment from County and State Medical Societies, from chartered medical colleges, hospitals, and permanent voluntary medical associations in good standing with the profession, and from the medical staffs of the army and navy. The county, district, and voluntary chartered medical societies, shall have the privilege of sending one delegate for every ten of its resident members, and one more for every additional fraction of more than one-half that number; while every State Society may send four delegates, and, in those States in which county and district societies are not generally organized, they shall be entitled to send one for every ten regular members, and one more for every additional fraction of more than half of this number. No medical society shall have the privilege of representation which does not require of its members an observance of the code of ethics adopted by the Association. Every chartered medical college, acknowledging fealty to the code of ethics, having six professors, and giving a course of lectures of not less than sixteen weeks annually, requiring also of students three years study; and hospitals, and lunatic asylums, having accommodations for one hundred patients, shall be entitled each to one delegate. The University of Virginia, in consequence of its peculiar mode of instruction and examination, was mentioned as worthy of representation, notwithstanding it does not comply, in some respects, with the terms of the proposition; but the exception in its favor is only to be continued so long as the present system of teaching shall remain in force.

## PROCEEDINGS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA,

*At its Annual Session, Philadelphia, May, 1852.*

PHILADELPHIA, MAY 26th, 1852.

The Medical Society of the State of Pennsylvania convened, pursuant to adjournment from the last annual session, in the Hall N. W. corner of Chestnut and Twelfth streets, and was called to order, at half-past eleven o'clock, A. M., by the President, CHARLES INNES, M. D., of Northampton county. On motion of Dr. WEST of Philadelphia, the President appointed a committee, consisting of Drs. WEST, Shannon, of Schuylkill, and Townsend, of Chester, to examine and verify the credentials of delegates. The committee reported the following:

[Those to whose names an asterisk is appended were in attendance during the session.]

*Berks.*—William Gries, M. D.,* Edward Wallace, M. D.,* D. L. Beaver, M. D.,* Caleb Leggett, M. D.,* P. G. Bertolet, M. D.,*

*Blair.*—J. M. Confer, M. D.,* John D. Ross, M. D.,*

*Bucks.*—William S. Hendrie, M. D., O. P. James, M. D.,* Ralph Lee, M. D., Samuel Carey, M. D., James S. Rich, M. D.,* Charles Foulke, M. D.

*Chester.*—Wilmer Worthington, M. D., Andrews Murphy, M. D.,* Joseph Hickman, M. D.,* John P. Edge, M. D.,* Septimus A. Ogier, M. D.,* A. K. Gaston, M. D.,* W. W. Townsend, M. D.,* Isaac R. Walker, M. D.,* Samuel H. Harry, M. D.,* Bartholemew Fussell, M. D.

*Delaware.*—Samuel A. Barton, M. D., M. Emanuel, M. D.,* R. K. Smith, M. D.,* George Martin, M. D.*

*Erie.*—C. F. Perkins, M. D.,* F. W. Miller, M. D.,* Jacob Vosburg, M. D., W. B. Williams, M. D., B. E Phelps, M. D.

*Huntingdon.*—J. G. Lightner, M. D.,* Jonathan H. Dorsey, M.D.,* Mordecai Massey, M. D., J. B. Luden, M. D.*

*Lancaster.*—F. S. Burrowes, M. D., F. A. Muhlenberg, M. D., John L. Atlee, M. D., Samuel Duffield, M. D., J. B. Stubbs, M. D., J. L. Ziegler, M. D., Joseph Gibbons, M. D., J. A. Ehler, M. D.,* Henry Carpenter, M. D., P. Cassidy, M. D.,* C. O. Richards, M. D., E. L. Baer, M. D., Thomas Ellmaker, M. D.

*Lebanon.*—J. Breitenbach, M. D.

*Mercer.*—John T. Ray, M. D.*

*Mifflin.*—George V. Mitchell, M. D.,* Thomas Van Valzeh, M. D.*

*Montgomery.*—Hiram Corson, M. D.,* H. Geiger, M. D.,* Wm. A. Van Buskirk, M. D.,* G. W. Wimley, M. D.*

*Northampton.*—Charles Innes, M. D.*

*Perry.*—A. C. Stees, M. D.*

*Philadelphia.*—G. B. Wood, M. D.,* Samuel Jackson, M. D., 8th street,* Joseph Pancoast, M. D., T. D. Mütter, M. D.,* H. S. Patterson, M. D.,* I. Parrish, M. D.,* Samuel Jackson, M. D., Spruce st.,* Wm. Pepper, M. D.,* I. Hays, M. D.,* George Fox, M. D.,* G. Emer-

son, M. D.,* A. Stillé, M. D.,* G. W. Norris, M. D.,* H. Bond, M.D.,* F. West, M. D.,* P. B. Goddard, M. D.,* T. F. Betton, M.D.,* E. F. Leake, M. D.,* A. Naudain, M. D., Ed. Janvier, M. D., J. M. Pugh, M. D.,* I. Remington, M. D.,* Jos. Warrington, M. D.,* G. W. Patterson, M. D.,* Wm. Mayburry, M. D.,* T. H. Yardley, M. D.,* D. F. Condie, M. D.,* Wm. Henry, M. D.*

*Schuylkill.*—Samuel H. Shannon, M. D.,* James S. Carpenter, M.D.,* David I. McKibbin, M. D.,* George Halberstadt, M. D.,* J. M. Koehler, M. D.

The Secretary, ISAAC REMINGTON, M. D., called the roll, and 53 delegates answered to their names.

Drs. E. W. Hale, of Mifflin, and C. W. Parish, of Chester, were admitted to seats by resolution.

On motion of Dr. FOX, the reading of the minutes of the last session was dispensed with.

On motion of Dr. SHANNON, the President read the annual address, prepared in accordance with the resolution of the last session.

This address was exceedingly eloquent and instructive, and was listened to with great interest and satisfaction by the Society. Dr. Innes adverted to the origin and present condition of the Society, and, while he congratulated the members upon what had been accomplished in the cause of progress, he could not admit that the survey was altogether as flattering as might be desired. It was certainly a matter of some reproach that the movement for a general organization of the profession in Pennsylvania had been so long deferred. Stimulated by the example of sister States, and at the immediate solicitation of the medical societies of the counties of Chester and Lancaster, the State Medical Society was organized in the year 1848—a movement which he felt he might safely say was not premature. This was the fifth annual session of the Society. The assemblage before him was certainly a very gratifying representation of the profession of the State, but he could not withhold the expression of his regret that so much territory within its borders remained unrepresented. Scarcely one third of the State had been represented at the last session, and but 17 of our 63 counties have formed auxiliary local associations. This was indeed lamentable apathy, and a far less cordial response of the profession than might have been expected. Whence, he asked, this reluctance to organize county societies? and why did so many of our brethren refuse to come into fellowship with us? He was indeed at a loss to understand this non-appreciation of the social and professional advantages to be derived from a commingling of the members of the profession. As regards the hostility to the county Societies, which had been elicited in some quarters, he must avow his frank conviction that it could proceed only from an absence of true professional spirit, and from an indisposition to look beyond individual aggrandisement. Indeed he must assign to selfish and mercenary motives the active opposition which had been advanced to the late attempts to organize the profession in our State, and he trusted that all who had remained aloof, from mere indifference, would not for the

future abstain from lending their names and influence to the cause of association.

Dr. Innes commented with deserved severity upon the sinister and sordid views which had induced many to abstain from uniting in this organization. He felt that a disinclination to adhere to a proper fee bill was a motive, with at least some, for standing off; and he handled with just and pointed sarcasm the "cheap doctors," who underbid their compeers, to obtain practice, and brought our noble profession down to the level of a mere trade. He cited, as worthy of imitation, the example of the Western Medical Society of Wisconsin, which obliged the Corresponding Secretary to invite all practitioners residing in the State to become members of the State Society, with a proviso that those who should fail to respond to the appeal, within six months, should be deemed irregular, and be cut off from professional intercourse. The Medical Society of Northampton county, Pennsylvania, had resolved to consult only with members of their own or other county societies. In Erie county, also, the members of the county Society had adopted the same course, and declined all professional recognition of those who remained without the pale of their organization. These measures might seem ultra, but they were called for by the exigencies of the case, and he urged a non-intercourse policy—the argumentum ad hominem—as the only means of reaching the recusants. Some other lever than moral suasion was certainly needed to move them.

In conclusion, Dr. Innes expressed his approval of the recommendations of the Philadelphia County Medical Society, as regards State representation in the National Medical Association.

On motion of Dr. GRIES, of Berks, the thanks of the Society were unanimously tendered to the President for the Address just delivered, and it was ordered to be published in the Minutes.

On motion of Dr. CONDIE, of Philadelphia, the President appointed the following Committee to audit the Treasurer's accounts: Drs. Condie, Ehler, of Lancaster, and Ross, of Blair.

On motion of Dr. HAYS, of Philadelphia, it was ordered that the President appoint a Committee of one delegate from each County to nominate Officers for the ensuing year.

Dr. HAYS, as Corresponding Secretary, announced that since last year, but one additional county, *Cambria*, had formed a County Medical Society.

The Auditing Committee now reported that they had examined the Treasurer's accounts, and found a balance in hand of $123.41. $150 had been received from the delegates during the past year, and $26.59 had been drawn out. The report was accepted and the Committee discharged.

Dr. CONDIE, from the Committee on Publication, reported that the Proceedings of the last session had been published and duly distributed in September last; and that the County Societies, with three exceptions, had forwarded the sums assessed upon them for the expenses of publi-

cation. He thought it proper to mention that the counties which had not yet forwarded their quotas, were Mifflin, York, and Lycoming.

Dr. VAN VALZEH, of Mifflin, stated that the amount due from Mifflin had been collected, and if it had not been forwarded, it was doubtless through want of opportunity.

Dr. EHLER, of Lancaster, moved that the balance remaining in the hands of the Committee on Publication, be paid over to the Treasurer.

Dr. HAYS suggested to Dr. Ehler to amend his resolution so as to authorize the Committee on Publication to retain the balance now in their hands.

But, after a brief debate, the resolution of Dr. Ehler was adopted in its original form.

On motion of Dr. CONDIE, it was resolved that no assessment be made upon the delegates for the present session.

The following resolutions were, on motion of Dr. CONDIE, adopted on the subject of Publication: 1st, the resolution passed at the last session, in reference to printing the Proceedings, was re-enacted in the same form; 2d, the chairman of the Committee on Publication was directed to pay over to the Treasurer all funds hereafter received from county societies, to be subject to the order of the Committee on Publication, together with the remaining balance in the Treasurer's hands, for the expenses of publication.

Dr. FOX, of Philadelphia, announced that he declined being considered a candidate for re-election to the office of Treasurer.

The Society now adjourned to half past four, P. M.

AFTERNOON SESSION.

The Society met, pursuant to adjournment, the President in the chair.

The President announced, as the Committee to nominate officers,—Drs. Hays, of Philadelphia, James, of Bucks, Gries, of Berks, Confer, of Blair, Murphy, of Chester, Martin, of Delaware, Perkins, of Erie, Dorsey, of Huntingdon, Van Buskirk, of Montgomery, Cassidy, of Lancaster, Van Valzeh, of Mifflin, Stees, of Perry, Shannon, of Schuylkill, Breitenbach, of Lebanon, and Ray, of Mercer.

The reports from the county Medical Societies were called for, and and were submitted and read seriatim. They were exclusively from the interior counties,—Philadelphia county, which presented so able a report last year, having this year been derelict. The reports were received by the Society with great satisfaction, and elicited the warmest commendation in all quarters, for the spirit, research and general ability by which they were characterized. It was felt by all who had the good fortune to listen to these interesting and instructive papers, that the Society had already accomplished much, in developing so large an amount of valuable statistical information on the medical topography and diseases of our State.

The counties from which reports were presented were, Schuylkill, Delaware, Mifflin, Chester, Lebanon, Blair, Bucks, Huntingdon, Berks, Erie, Lancaster, and Perry. The reports from the three last-named

counties were limited to notices of the proceedings, and lists of the officers and members of the county societies. A report, not presented, was prepared from Montgomery, which is to be handed to the Committee of Publication.

Dr. HALBERSTADT, of Schuylkill, presented and read the report from that county, appended to which was a beautifully executed geological chart of the county. This report, which was drawn up with admirable conciseness, contained a brief sketch of the organization of the county Medical Society, (now in existence seven years,) a statistical and topographical sketch of the county, with particular reference to the relation between its diseases and geological formations, and a history of the diseases which prevailed during the past year, with the treatment pursued, &c. The report recommended the Society to group together the same geological strata, in distributing the State among Committees for future reports, as the best means of accumulating general results. This suggestion, it will be seen by reference to the later proceedings, the Society adopted.

Dr. SMITH, of Delaware, presented and read the report from that county, which was also accompanied by a geological chart. This report contained a preliminary topographical and botanical notice of the county, with meteorological observations for the last four years; followed by a highly interesting account of the diseases observed in the county during the past year. The report expressed a disbelief in the opinion advanced in various quarters, that geological formations influence the development of disease, with the single exception of the prevalence of remittent and intermittent fevers in alluvial districts.

DR. CONDIE, (by request), read the report from Mifflin county, which was understood to have been drawn up by Dr. Henderson, of Mifflin, who was not present. This report, the first from Mifflin county, presented a detailed description of the topography and geological formations of the county, designed by the county society, to serve as a *primary* report, which should be the basis of future reports. This was followed by a very interesting sketch of the diseases prevalent in the county, from which we select one or two points which particularly arrested our attention. Diseases of malarious origin are of rare occurrence in the county. Epidemic dysentery is sometimes witnessed; and the exemptions from its visitations, claimed for the *limestone districts*, in the reports of Berks and other counties, has not been noticed in Mifflin. A circumscribed epidemic typhus fever prevailed some time since, which appeared to have been generated originally by decayed matter in a house overflowed with water, and which in its progress manifested the clearest characters of contagion.

The President presented the resignation by Dr. C. D. Gloninger, of the office of recording secretary, which, on motion, was accepted.

The Secretary presented and read the report from Chester county, which was chiefly taken up with descriptions of the diseases prevalent in various sections of the county, by the physicians of the respective localities. Although the committee expressed regret that they had not ob-

tained a more general response from the physicians of the county, they were enabled to present numerous highly interesting details of the medical topography of this large county, which contains, according to the report, one hundred regular physicians. With their next annual report, the Chester county society expects to furnish a geological map of the county.

Before the conclusion of this report, on motion of Dr. Gries, the Society adjourned to half past ten o'clock, A. M., the next day.

*Second day's session, 27th of May,* 1852.

The Society met pursuant to adjournment, the President in the chair.

The reading of the Chester county report was resumed and concluded.

Dr. C. W. Parish, of Chester, moved that the reading of the remaining reports be dispensed with. Dr. Stillé, of Philadelphia, moved as an amendment, that hereafter when reports of committees shall require more than fifteen minutes to be read, the reporters shall present and read abstracts of their contents. Dr. Parish accepted this in lieu of his own resolution.

A brief debate ensued, in which Drs. Stillé, C. W. Parish, and Gries advocated the reading of condensed abstracts of the reports of the county societies, rather than the reports at length; and Drs. I. Parrish, Wood, Emerson, and Hays, deprecated any attempt to cut them short. Dr. I. Parrish urged, that to listen to these reports was the chief purpose for which they had assembled, and he thought the time of the Society would be much better employed in this way, than in protracted discussions upon minor points of business.

On motion of Dr. Hays, Dr. C. W. Parish's motion was laid on the table.

Dr. Hays moved that a committee be appointed to devise a plan for the appointment of committees to collect accounts of epidemics, as they prevail through the different geological formations of the State.

At the suggestion of Dr. Emerson, of Philadelphia, the mover laid this resolution on the table, to be taken up hereafter.

Dr. Harry, of Chester, presented an Appendix to the Chester county report, which, on motion of Dr. Edge, of Chester, was referred, along with the original report, to the Committee on Publication.

Dr. H. S. Patterson, (by request), in the absence of Dr. Gloninger the reporter, presented and read the report from Lebanon county. It offered an interesting sketch of the medical topography of the county, and was accompanied by a well executed map.

The Secretary presented and read the report from Blair county, which was mainly devoted to a description of the prevailing diseases of the county, and the mode of treatment. The report asked the attention of the State Society to the culpable neglect of vaccination which prevails in many of the rural districts.

Dr. Rich, of Bucks, presented and read the report from that county. He stated that there had been no regularly constituted committee of the Bucks County Society, to prepare a report; but that the delegates had been charged with the duty. It had fallen to Dr. Rich's lot, though not

the first named among the delegates, to prepare the report, and as he had had but a short notice, and had received no information from the physicians of the county, he could not offer much. Bucks county, however, hoped to do better in future. Notwithstanding] the limited resources at Dr. Rich's disposal, he furnished many interesting details of the topography, geology, and diseases of the county. He expressed as the result of his observation, the opinion that the diseases of the county had depended essentially upon the geological formations.

The Secretary presented and read the report from Erie county, which was limited to a report of the proceedings of the county society. A complete report of the medical topography of that county is promised next year.

Dr. Luden, of Huntingdon, read the report from that county. It gave the topography and geological features of the county, but expressed difficulty in deciding, in so mountainous a region as Huntingdon county, how far the geological formations influence the development of diseases. Atmospheric vicissitudes, combined with malaria, appear to be the main causes of disease in that region. The whole valley of the Juniata is a malarious district.

The Report of the Berks County Society was now presented; but, as it was offered in a printed form, in two numbers of the Peoples' Advocate newspaper, of that county, it was objected to as irregular. After some debate it was referred to a special committee, to report at the afternoon session. Drs. H. S. Patterson, I. Parrish, and West, were appointed this committee.

The Secretary presented reports from the Lancaster and Perry County Societies, which were confined to lists of the officers and members of the Societies of these counties.

Dr. Ehler offered a resolution, expressing the regret of the Society at the death of Dr. George B. Kerfoot, of Lancaster, a member of the Society from its origin, and for two years its Recording Secretary. This was unanimously adopted, and the Secretary was directed to forward a copy of the resolution to the family of the deceased.

On motion of Dr. Ray, of Mercer, a similar resolution was adopted in reference to the late Dr. John Baskin, of Mercer, one of the Vice Presidents of the Society.

Dr. Hays offered the following resolution: "That the members of this Society, when associated for educational or other purposes, owe the same fealty to the code of ethics of the Society in their corporate and associate capacities, as they do as individuals." This resolution, Dr. Hays averred, was designed to express disapproval of the puffing strain indulged in by the Faculties of certain Medical Colleges in their Annual Circulars or Announcements.

Dr. Jackson, of Philadelphia, (of the University of Pennsylvania,) had no objection to the resolution, as an abstract proposition; but he was not aware that the practice of any of the Schools was such as had been stated. Nothing of the kind had come under his notice.

After a few remarks from Drs. Wood, Jackson, (late of Northumberland,) and Gries, the resolution was adopted.

Dr. Condie offered the following resolution: "That this Society holds all professional intercourse with irregular practitioners, of whatever name or pretensions, and all countenance of their peculiar views or mode of treatment, as a breach of professional ethics; a persistence in which should preclude the individual so offending from membership in any county Society, or, if he be already a member, should subject him to expulsion."

This resolution was briefly debated by Drs. Gries, Condie, Corson, Betton, Perkins, and H. S. Patterson. Dr. Patterson objected to re-enacting by simple resolution what was already a part of the organic law of the Society. If cases in violation of the principle of the resolution had occurred, other methods of reaching the offenders might be found. They should be brought before their respective County Societies, where they would be more speedily and efficiently dealt with. Dr. Patterson pointed out the authority granted by the constitution to the county Societies to punish delinquent members, and he also cited the article on Consultations from the Code of Ethics as covering the ground.

Dr. Condie now expressed himself satisfied that the subject was provided for in the quarter pointed out by Dr. Patterson, and thereupon withdrew his resolution.

The Society adjourned to meet at half-past four, P. M.

AFTERNOON SESSION.

The Society met, pursuant to adjournment, at half past four o'clock, P. M., the President in the Chair.

Dr. H. S. Patterson, from the committee to whom the Berks County report had been referred, reported: That the Committee deemed the publication in a newspaper irregular, but that it appeared to have been done merely for the convenience of the Society—Dr. J. L. Stewart, the writer of the report, being the Editor of the newspaper in question—and that no disrespect was intended to the State Society. Under these circumstances, the error being clearly from inadvertence, and the paper appearing to possess considerable value, the Committee recommended that it be received and read, and also that the Berks County Medical Society be admonished of the impropriety of the course pursued by them.

The report was adopted, and the report from Berks County was accordingly read by Dr. Wallace, of Berks, and was listened to with much interest and gratification by the Society.

After the report had been read, Dr. Wallace moved that a paper which had been read before the Berks County Medical Society, on the Epidemics of the County, be now read and added to the report of the Berks County Society as an Appendix. The motion was adopted, and Dr. Gries read an interesting paper, in which, after presenting a sketch of the diseases lately prevailing in Reading and its vicinity, he gave a lengthy account of a recent epidemic of *Catarrho-Nervous Fever*, which he had treated successfully with large doses of the sulphate of quinine.

Dr. Wallace presented and read a report from the Berks County Society, on the subject of spurious drugs, appended to which was a

series of resolutions, which were afterwards withdrawn by the Berks county delegation.

The reports from the County Medical Societies were, on motion, severally referred to the Committee on Publication.

The President presented the resignation by Dr. REMINGTON of the office of Recording Secretary; which, on motion, was accepted, to take effect from the close of the present session.

On motion of Dr. WIMLEY, of Montgomery, the Committee on Publication was authorized to receive the Report of the Montgomery County Society, if handed in before the publication of the Proceedings of the present session.

Dr. WIMLEY, in accordance with instructions from the Montgomery County Medical Society, offered the following preamble and resolutions:

*Whereas*, At the last meeting of the American Medical Association, the subject of amending the Constitution, so as to change the present mode of representation, was presented by a committee, and will be acted on at the next meeting of the Association, therefore,

*Resolved*, That the State Medical Society of Pennsylvania favors the principle of representation by delegates from *County*, *District* and *State* Medical Societies, as that most accordant with the genius of our institutions, and most likely to promote the permanency and success of the National Association.

*Resolved*, That the admission of delegates from Medical Colleges, Hospitals, and other Medical Institutions, although adapted to the forming stage of the Association, is no longer necessary; and is calculated to produce dissatisfaction amongst the mass of the profession, by creating privileged classes, and by giving an undue influence to physicians in large cities, over those residing in country districts and in the smaller towns.

*Resolved*, That restricting representation to *County*, *District*, or *State* Societies, and conferring upon the members of these bodies the right of membership in the National Association, will, in the opinion of this Society, offer a powerful inducement for Physicians throughout the United States to organize in their respective districts, and thus become constituent branches of the Association, and entitled to all the rights and privileges which such membership can confer.

*Resolved*, That the delegates from this Society be requested to lay these resolutions before the National Association, signed by the officers of the State Society, and that they use their exertions to have the principle of representation herein approved, adopted by that body.

Without taking any action on these resolutions, the Society adjourned to Friday, 28th, at 11 o'clock, A. M.

*Third day's Session, 28th May*, 1852.

Pursuant to adjournment, the Society met at eleven o'clock, A. M., the President in the chair.

On motion of Dr. WIMLEY, the Society proceeded to the considera-

tion of the Montgomery county resolutions on representation in the National Medical Association.

Dr. GRIES took the floor, in support of the resolutions, and read a written speech, of some length, in which he animadverted on the unnecessary multiplication of medical schools witnessed within the last few years, and on the almost total absence of a proper standard of examinations for degrees. He referred, in terms of warm commendation, to the admirable address of Dr. Jackson, (late of Northumberland,) delivered before the Philadelphia County Medical Society in February last, and expressed the hope that the State Society would endorse the principles urged by Dr. Jackson.

On motion of Dr. SMITH, of Delaware, it was now *Resolved*, That the members of the Society be not allowed to speak more than twice, or longer than ten minutes on the same question, without permission.

It was ordered that the Montgomery County resolutions be taken up separately.

Dr. HAYS moved to amend the first resolution, by inserting,—after the words "County, District, and State Medical Societies,"—"and a restricted representation from Medical Colleges, subject to certain conditions."

Dr. HAYS believed that the introduction of these resolutions was an attempt to manufacture public opinion on the subject, and to prejudge the question in advance of the action of the National Medical Association. Under existing circumstances, he admitted that it was inexpedient to continue, unchanged, the present plan of representation in the Association. It was certainly unequal. But, in endeavoring to remedy this inequality, we should not go too far, lest, in the end, we overreached ourselves. If we exclude the Colleges entirely from representation in the Association, they become our masters. Allow them a restricted representation—he was not for extending it beyond a single representative—and we control them. By thrusting *all* the schools out of the Association, the good and the bad together, we shall be really giving countenance to those whose course is disgracing the profession. Say that those only who come up to the conditions laid down by the Association, and who comply in good faith with its requisitions, shall have a place, and you will encourage the well disposed schools to persevere in their efforts at improvement and reform, and ultimately break down those who pursue a contrary course. He said that the Committee of the National Medical Association, to whom this subject had been referred, proposed to allow one representative in the Association to all Colleges which had six professors, which gave an annual course of at least sixteen weeks, and which exacted from candidates for graduation, that they should be twenty-one years of age, have studied for three years, two of which must have been with some respectable practitioner, and should have attended two full courses of lectures. He was strongly of opinion, that if we desired to see the schools come up to this standard, we should not shut them out of our ranks. If we continued to receive representatives from them, he believed that we should ultimately destroy all who refused to comply with our demands.

Dr. H. S. PATTERSON thought that the thanks of the Society were due to Dr. Hays, for presenting the question in a nut-shell. The question was now clearly, whether the members of the medical schools were to sit in the National Association as *individuals* or as *professors*. As regards the feeling of the schools on this point, he was pretty certain that they did not ask the privilege as a body, and that very many faculties were not at all strenuous about retaining it. Be this as it may, however, we have the question now directly brought to an issue, by the Montgomery County resolutions on the one side, and Dr. Hays' amendment on the other. Dr. Hays' argument, that we should keep the schools in the Association to have them under control, Dr. Patterson said, appeared to him like the idea of "marrying a man to get rid of him." He really could see no force in it. But he could see much force in the objections urged against the inequality and injustice of the privileges claimed for the schools. To allow a faculty of six professors one representative—for they could not go below one—was certainly to establish a very great disproportion between professors and members of the county medical societies. And, besides this, there was another injustice; the professors were twice represented, once from the faculties, and again from the societies. Now, there was a very general feeling, which, whether just or not, it was wise to respect, that this distinction ought not to be made between professors and other members of the profession. It savored of an oligarchy; it made a sort of upper house, although sitting in the same body. It were far better for the gentlemen of the schools to come down to the same level with their brethren, and to consent to make the National Association a purely representative body. He was for adopting an equal ratio—not so high as to exclude sparsely settled districts, but, on the other hand, not low enough to make the Association an indiscriminate crowd. And he thought there would always be a fair proportion of professors in the body, as in fact they often went there now, from this city, as representatives of the College of Physicians, and of the County Medical Society. There need be no fear, he thought, that the Association would lose a control over the schools, because they were not to be allowed to knock at their doors with the privileges of close bodies. They would always be within the reach of a sound and healthy public opinion; and this they would never defy. At all events, he had little faith in the efficacy of mere legislation. And he was satisfied that the establishment of an inquisitorial censorship over the Colleges, such as Dr. Hays' plan seemed to imply, was exceedingly difficult. It would certainly lead to a delicate and dangerous assumption of power, which would be always most reluctantly exercised, from an indisposition to establish personal enmities.

Dr. HAYS reiterated his views.

Dr. I. PARRISH expressed his cordial approval of Dr. Patterson's remarks.

Dr. CONDIE was in favor of the amendment of Dr. Hays. His own opinions, which he had long since expressed, were in accordance with the tenor of the Montgomery county resolutions; but he knew that the sentiments which prevailed in the National Association were the other

way, and he thought it inexpedient to tie the hands of the representatives whom we sent there, lest our vote should be lost. It was best for the present to be content with a *restriction* of college representation, and not to endanger the whole plan for improving the representation of the Association, in the attempt to accomplish too much.

The question was now taken on the amendment of Dr. Hays, and it was lost—yeas 20, nays 25. The first resolution of the series was then adopted.

The second resolution coming up, Dr. STILLÉ urged, that there was a palpable impropriety in the use of the language, "that the admission of delegates from colleges, &c., produces dissatisfaction among the mass of the profession;" as, on the contrary, the feeling at the late meeting of the National Association was nearly unanimous in favor of retaining a restricted representation of the colleges.

Dr. WOOD said, that although his position prevented him from taking part in the discussion on the main question, he must be permitted to observe that the close vote just taken here, (20 to 25,) made it pretty obvious that the feelings of the great mass of the profession were less earnest on the subject than the resolution claimed.

After some further discussion, the second resolution was laid on the table, and Dr. Wimley subsequently withdrew it.

Dr. HAYS hoped the third resolution would be also laid on the table.

Dr. PARRISH urged its passage, deeming it strictly in conformity with the first resolution. It was adopted without a division.

Dr. STILLÉ moved to lay the fourth resolution on the table. This motion was lost, and the resolution was then adopted.

The preamble was then adopted.

Dr. EMERSON offered a series of resolutions which were adopted unanimously, urging it, as an imperative duty, on all regular physicians in the State, to connect themselves with the county societies now organized, or to organize them in counties where they do not exist; and the county societies are requested to have these resolutions published in the newspapers of their localities.

Dr. EMERSON made a report from the special committee appointed at the last annual session, to investigate the conclusions put forth by Drs. Gregory, of London, and Cazenave, of Paris, in relation to variola and vaccination. These conclusions are not sustained by the committee.

Dr. EMERSON, from the Committee appointed at the last session, to memorialize the Legislature for the passage of an act to secure the gratuitous vaccination of the poor throughout the commonwealth, reported that the memorial had been printed and distributed. The committee was continued.

On motion of Dr. CORSON, the committee on Publication was instructed to distribute the 150 copies of the Proceedings of the last session, remaining undisposed of, to prominent physicians of counties which have not yet organized county medical societies throughout the State, and to urge on them the immediate organization of county societies.

On motion of Dr. FOX, the resolution adopted at the first meeting of

the present session, appropriating all the funds of the Society to the Committee on Publication, was reconsidered, and afterwards amended, by inserting the words, "after defraying the necessary expenses of the Society."

Dr. GRIES asked and obtained permission to withdraw the Berks county report on spurious drugs.

Dr. CORSON, in behalf of the Montgomery County Medical Society, offered a resolution inquiring of the State Society the legitimate construction of sec. 3d, art. 6th of the constitution: "Whether the said section applies to any others save those who actually compound, prepare and sell secret or patent medicines; or whether it applies equally to wholesale and retail druggists, or those who sell them, as one of the unavoidable results incident to the keeping of a drug store." Referred to a special committee, consisting of Drs. H. S. Patterson, Mayburry, and Wallace.

Dr. HAYS, from the Committee on Nominations, made a report, which was objected to by Dr. Fox, on the ground that one of the persons nominated was constitutionally ineligible, not being a delegate. The report was referred back to the Committee.

Dr. SMITH, under instructions from the Delaware County Medical Society, submitted a report on the subject of gratuitous attendance on the poor. At the suggestion of Dr. CONDIE, it was laid on the table till the afternoon.

The President announced Drs. Condie, I. Parrish, and Norris, as members of the Committee on Publication in addition to the ex-officio members.

The Society adjourned to four o'clock, P. M.

AFTERNOON SESSION.

The Society met, pursuant to adjournment, at four o'clock, P. M., the President in the Chair.

On motion of Dr. CONDIE, the Society took up the Report of the Delaware County Society on the subject of gratuitous attendance, when a report was read, which had been presented to the Philadelphia County Society on the same subject. This report expressed an opinion adverse to any action on the subject, which contravened the established usages of the profession, as laid down in the Code of Ethics. While not disposed, however, to narrow the limits within which the benevolence of the profession had been extended, the committee laid it down as a principle that medical attendance on paupers should be provided for at the expense of the community in which they lived. Almshouses should certainly be expected to compensate their medical officers; while, however, in hospitals supported by private charity and by funds bequeathed by charitable individuals, the services of physicians might with propriety be rendered gratuitously, the reputation accruing therefrom being considered a sufficient remuneration.

Dr. SMITH would not have it supposed that there was a single word in the Philadelphia County report to which any member of the Delaware County Society took exception. But he thought the state of

things in the country, on the subject of what was termed out-door attendance on paupers—whatever might be the rule in Philadelphia—was such as to call for the appointment of a committee to take the subject into consideration.

A brief debate ensued, in which Drs. Perkins, Corson, Emerson, Henry, Hays, and Condie participated; and, finally, on motion of Dr. CONDIE, the reports from both counties were referred to the Committee on Publication.

Dr. HAYS called up his resolution for the appointment of a committee to devise a plan for the arrangement of committees to report on diseases in connection with geological formations. It was adopted, and Drs. J. P. Hiester, Halberstadt, and Corson were appointed the committee.

Dr. H. S. PATTERSON, from the Committee to whom the queries of the Montgomery County Society had been referred, reported: That the Montgomery County Society be informed, that no one, who is in any way connected with the manufacture or sale of patent medicines, can be allowed to become or remain a member of State or County Society.

Dr. HAYS, from the Committee on Nominations, reported the following list of Officers for the ensuing year, and, on motion, the persons nominated were unanimously elected.

*President.*—HIRAM CORSON, M. D., of Montgomery.

*Vice-Presidents.*—GEORGE HALBERSTADT, M. D., of Schuylkill, JOHN T. RAY, M. D., of Mercer, J. D. ROSS, M. D., of Blair, C. F. PERKINS, M. D., of Erie.

*Recording Secretaries.*—HENRY S. PATTERSON, M. D., of Philadelphia, JOSEPH GIBBONS, M. D., of Lancaster.

*Corresponding Secretary.*—ISAAC HAYS, M. D., of Philadelphia.

*Treasurer.*—FRANCIS WEST, M. D., of Philadelphia.

*Censors.*—1st and 2d districts, G. B. WOOD, M. D., and G. W. NORRIS, M. D., of Philadelphia, WILMER WORTHINGTON, M. D., of Chester, JESSE YOUNG, M. D., of Delaware, J. W. GLONINGER, M. D., of Lebanon. 3d and 4th districts, J. M. DORSEY, M. D., of Huntingdon, J. H. CASE, M. D., of Perry, WM. MCILVAINE, M. D., of York, JOS. HENDERSON, M. D., of Mifflin, THOS. WOOD, M. D., of Lycoming. 5th and 6th districts, C. F. PERKINS, M. D., of Erie, W. McK. MORGAN, M. D., J. P. GAZZAM, M. D., J. DICKSON, M. D., and W. ANDERSON, M. D., of Alleghany.

*Delegates to the American Medical Association.*—C. INNES, M. D., of Northampton, ISAAC THOMAS, M. D., of Chester, F. S. BURROWES, M. D., of Lancaster, JOS. CARPENTER, M. D., of Schuylkill, THOS. VAN VALZEH, M. D., of Mifflin, R. E. JAMES, M. D., of Northampton, JAS. R. MCCOY, M. D., of Bucks.

On motion of Dr. EMERSON, it was resolved, that when the Society adjourns, it adjourn to meet in the city of Philadelphia, on the fourth Wednesday in May next.

On motion of Dr. CONDIE, the Delegates to the American Medical Association were authorized to appoint substitutes, in case of their inability to attend.

Dr. INNES now vacated the chair, and, in retiring from its duties, he expressed his acknowledgements to the Association, for the kindness and courtesy, which had been extended to him.

Dr. CORSON, President elect, was conducted to the chair by Dr. INNES, and in a few neat remarks returned thanks for the honor conferred.

On motion of Dr. CONDIE, Dr. Corson was requested to furnish an abstract of his address on taking the chair, for record in the minutes.

Votes of thanks were passed to the officers, and to the Philadelphia county delegation, and the Society adjourned sine die.

[The whole number of delegates in attendance, who signed the roll, was sixty-seven.]

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THE VOLTAIC PILE.—The President of the French Republic has published a decree offering a reward of 50,000 francs (2,000*l.*) to such persons as shall render the voltaic pile applicable with economy to manufactures, as a source of heat, or to lighting, or chemistry, or mechanics, or to practical medicine. Persons of all nations may compete for this prize, and the competition is to be open for five years.

The Union Medicale states that in 1812 there were 537 medical men practising in Paris, whilst in 1851 there were 1,352, being an augmentation of 815 in 40 years. The population of Paris in 1812 was 547,756 inhabitants, or 1,018 persons for each medical man; at present it is 900,000, or 666 for each medical practitioner.

NOVEL TREATMENT OF ANEURISM.—We have been much interested during the last few weeks in watching the progress of a case of aneurism of the subclavian artery under the care of Mr. Fergusson, in which a novel and ingenious method of treatment has been adopted. In imitation of an occurrence which occasionally happens by accident in cases of aneurism, viz., displacement of the mass of fibrine, or a portion of it, which is usually present in such tumours, whereby, in consequence of alteration in the current of the blood, a spontaneous cure results, Mr. Fergusson has, by manipulation of the tumour, thrown loose a portion of the fibrine in the case alluded to, with the effect of instantaneously arresting all pulsation in the upper limb. In four days a feeble pulsation at the wrist could be detected, but the axillary has been pulseless since. The tumour itself, which was at first about the size of a small hen's-egg, has diminished considerably, and the throbbing within is now little greater than in the subclavian artery of the opposite side, while it has become more solid to the touch. To those familiar with the pathology and treatment of aneurism, and especially the fatal results which have hitherto followed all attempts at cure by operation on the subclavian on the tracheal side of the scaleni muscles, we need hardly point out the interesting character of the case now under Mr. Fergusson's care.—*Medical Times and Gazette, March* 6, 1852.

THE

# MEDICAL EXAMINER,

AND

# RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. XCI.—JULY, 1852.

## ORIGINAL COMMUNICATIONS.

*On the Functions of the Great Sympathetic Nerve, or the Nerve of Organic Life.* By WM. GRIES, M. D., of the city of Reading, Pennsylvania.

In an essay, which I had the honor of reading before the "Medical Society of the city of Reading, and county of Berks," on the 6th of April last, and again before the "Medical Society of the State of Pennsylvania," at its annual session in the last week in May, at Philadelphia, I made the following cursory remark: "Upon serious reflection I looked upon all the diseases as being under the influence of some cause affecting more particularly the organic nervous system, prostrating it, and disturbing its proper action—and I concluded that this must be corrected—and it appeared to me that the sulphate of quinine, in proper doses, would do this better than any other medicine." If I am not deficient in information, the opinion held by the profession in general, with reference to the functions of the organic nerve, is, that it may be compared to lines of telegraphic wires extended from one organism to another, to give mutual information how each performs its functions, and to combine all the organisms

in a concert of action, to work out the great objects of manifesting life. This I have been led to consider a very imperfect and partial view: and I have been perfectly astounded that the views brought out, more than thirty years ago, by Dr. Jas. Copland, of England, and so ably extended and maintained in his great work, "the Dictionary of Practical Medicine," should have attracted so little attention from the profession. The more I have studied the subject in his writings and by my own observations upon the diseases that have come under my notice, the more have I been convinced of their truthfulness; and I refer with confidence to the cases recorded in my essay above referred to, as illustrative and confirmatory of those views. Whilst I was making those observations, I was perfectly electrified when I read, in the April number of the "American Journal of the Medical Sciences" the experiments performed on the great sympathetic nerve, by M. Claude Bernard; and before I had finished the reading of that short notice, I was irresistibly convinced that it fully confirmed all those views of Dr. Copland. I reasoned thus: if the destruction of a small cervical branch of the sympathetic has the effect of producing those results stated in that notice, it must, of necessity, follow, that an impairment of its vitality must, in a degree commensurate with the degree of that impairment, be followed by similar results on the whole system. I think that I may safely say, that I have now treated more than one hundred cases, similar to those recorded in my essay above referred to, upon the same plan, and I hesitate not to say, that, without a single exception, with equal success. In the observations I have made upon those cases I have much extended Copland's views, as far as their record has come under my review. I now look upon the great sympathetic as God's prime minister, appointed to preside over the whole organization of man, and to actuate and regulate all its vital actions, both physical and mental.

I believe that the nervous system of animal life, is as much under its influence and guidance for the performance of its proper functions, as any other organism in the body. In further illustration of my views I am tempted to say, with trembling awe, fearing that it borders on blasphemy, that the combined nervous systems are a triune government; that the great sympathetic operates through the system of animal life, and emanating from

both, the nervous fluid, or whatever name I may give it, manifests its power and action on the organism.

In illustration and confirmation of my views, which I have so categorically stated, I shall now recite other cases, and make observations upon them. As I have been myself the chief subject of experiment, I must now, even at the risk of being accused of egotism, give something of my personal history. However, I feel confident that the true physiological enquirer, for whom alone I write, will clear me of such an imputation.

About forty six years ago, when I was ten years of age, I had the intermittent fever for three months, of a tertian form. I could not retain sufficient cinchona on my stomach to interrupt or put a stop to the paroxysms, and my physician gave me frequent emetics without attaining that end; and I began to hate him and his emetics; for the sight of him was almost enough to make me vomit. I remember well yet, that in the latter part of my sufferings, when the paroxysm was at its height, I would have a sensation as if my head was expanding, and at last filling the whole house that I was in; when, of a sudden, I would be transported to the edge of a precipice or a chasm, and in the act of toppling over, I would scream out in agony; and my father would lead me or carry me about, which seemed to relieve me. From that time onward, all my mental faculties seemed to be blunted. My memory was less retentive; I was stupid and drowsy. I would frequently, when a grown up young man, fall asleep in the midst of company, even that of young ladies. I tried various plans to counteract it—low diet, &c.—but all without effect. Notwithstanding this impairment of my mental faculties, I never lost my appetite for mental food. I was mentally omnivorous. I thought frequently of Bacon's Aphorism, "reading makes a full man, writing a correct man, and conversation a ready man," and I often resolved to be governed by it, but never succeeded. I would add to the first branch—it also makes a dull and stupid man—for repletion with mental food has the same stupifying effect, that repletion has upon our physical organization. That I never benefitted by the second is abundantly evident, from the specimen before the reader. I have no power for precision in language; consequently I employ figures or analogies for illustration. I take hold of a figure, but I don't carry it out, and as

I pass on I fling away one and grasp at another, as it comes readily to hand. I have written but little, and, with the unfaithful steward, I buried my one talent, and took credit to myself for doing so. With reference to the last branch, I had but little opportunity to benefit myself, until the formation of the American Medical Association, and its auxiliaries.

I tried various means to excite my mental faculties; all alcoholic stimulants, distilled or fermented, always rendered me more stupid. When phrenology came in vogue, I paid considerable attention to the subject, and came to the conclusion that my brain, being a very large one, was made of very coarse material, and was never intended for literary or scientific occupation; and the rest of my physical structure being of little strength, I was led to fear that I was but poorly fitted for any station. As regards the phrenological development of some of the organs, veneration is very deficient, so that it requires a continual effort to properly venerate the Author of my being; but firmness, or what in me might, perhaps, more correctly be called stubbornness, is very strongly developed. Now the subject is described; next come the experiments.

At an early period of the prevalence of the peculiar state of disease described in the essay referred to above, I found my health deteriorating; my hepatic secretions and my bowels were particularly affected; it seemed paroxysmal, generally worse late in the afternoon and night. On account of being, for many years, a sufferer from emphysema of the lungs, I feared the use of quinia in large doses. I used mercurial alteratives, and mild laxatives, to mend the secretions, but they would not be mended. My appetite was impaired, my strength failed, and I was unapt for mental or physical exertion. I determined at length, by observing the benefit resulting on others from large doses of quinine, to use it on myself. I commenced by taking ten grains in the evening, before going to bed; it was followed, in about one hour, by a slight tremor in my hands, and in fact in all the voluntary muscles; but what completely and agreeably surprised me, and what I had not, in the smallest degree, anticipated, was the clearness and expansion of my mental faculties; I could think more clearly; and, after the lapse of about two hours, I fell asleep; and slept more soundly than I had for many years—(for

although I was always drowsy more or less, unless engaged in bodily exercise, yet I never slept soundly, and my awakening was not sudden.) I felt much better in the morning, more inclined to attend to my duties, and more capable of attention.

Upon reflection, through the day, I concluded that I had taken an overcharge (like an overcharge of an electric battery,) and I took a diminished dose in the evening. It was followed by less tremor, but equally sound sleep and readiness for mental and bodily action. In a few days I brought the dose to five grains, and took it before breakfast in the morning: at this dose it produced no tremor, and was followed by all the good desired. I have been taking it regularly now for four months, with an occasional interruption of two or three days. My appetite has been good, my secretions are corrected, my mind and body are invigorated; I have had no occasion for alteratives or purgatives. In a word, I have enjoyed life more for the last four months, than I had done for forty-six years. I had for a considerable time held the view that the remote cause of ague operated upon the great sympathetic, impairing, in some manner, its functions, and that this impairment was the proximate cause of ague; now I feel perfectly convinced of its truth, and, in my own case, reason: that my protracted ague, at ten years of age, impaired the power of the sympathetic, and that the sulph. quiniæ has restored that power. I further believe that that terrific disease, tetanus, may reasonably be ascribed to the impairment of the superintending power of the sympathetic over the nervous system of animal life, and that the latter runs furiously wild without the controlling check of the former. And I further believe that in very large doses of quinia, frequently repeated, will be found the remedy for this opprobrium of medicine. Nay, I go still further, to believe that even hydrophobia will yet submit to it. I feel that I am riding a hobby, and I am terrified when I reflect that many men of much superior capacity and experience have been engulfed in the slough and quagmire, by not restraining their hobbies; yet I cannot find prudence enough to draw in the reins of mine; his gait is so pleasant, I cannot look down, but up, and under a charm I go ahead. I write this only, as it were, to call for help, that if my friends see my danger they may cry out and stop me.

I hope that no one will understand me to say, that the sulph. quin. is a remedy for all kinds of morbid action in the sympathetic. It is intended only in its dynamic action. It isonly the remedy when it is in an adynamic state, to raise it to its proper standard, and to re-establish it in its proper office. Thus far my experience warrants me. That other morbid states may arise requiring different therapeutic agents, I have no doubt; but I do not understand them. My main object is to draw attention to its functions and to excite inquiry.

I have found it necessary to use more tonics of all sorts during the last six months than I did during ten years before, in proportion to the number of patients. Indeed, twenty-five years ago I was inexperienced enough to believe, that tonics might be expunged from the list of therapeutic agents. In order to show the perfect safety of the large doses of quinine, spoken of in my former essay, I will state, rather minutely, the case of a little girl, now two years of age. She was from birth of a delicate constitution, always very restless. About six months ago, when I was called to see her, she had pretty well developed symptoms of inflammation of the brain:—I got her over it with difficulty, and she had a protracted convalescence. During an early period of the epidemic scarlatina of last winter, she was attacked by that disease, and had a slow convalescence. About six weeks ago, she was taken with a severe attack of measles.

I ought to have mentioned that she was, almost from birth, affected by a slight cough. After the measles passed off, she was weak, fretful and sleepless. I had to give her opiates, and then again alteratives, to do away the mischief that the opium had done. I thought in her convalescence from scarlet fever that she was affected by the general epidemic influence, and I gave her, several times, two grain doses of quinia, with benefit.

During the protracted recovery from measles, I gave, on the 21st of May, four grains of sulph. quiniæ, in the evening; next morning the mother reported, that she had slept better that night, than she had for many nights before, and awoke much more cheerful. I gave her again four grains of quinia, and the next morning her mother remarked, when I called to see her, "Doctor, it is very strange that Amelia, always, when she takes that white medicine, sleeps better than on anything else, and awakes more

cheerful. On the 24th of May, as I was preparing to go to Philadelphia, I left a mixture of four grains of sulph. quin. to be given on the 28th, to prevent a relapse. Last evening her mother sent for some drops, to make her sleep, and I sent the four grain quinia mixture; this morning (June 4th,) I found she had slept well on it, and was very cheerful. I think it not out of place here to state another very remarkable case. On the 10th of April, I was called to a lady, who had born, three children, at single births, who are all living. She had been sick five days, under the hands of another *doctor*. I found her vomiting blood largely; she had great tenderness over the epigastrium—a costive state of bowels. She had also occasional bleeding from the nose. She thought that she might be two months enceinte. Her tongue, when protruded, was contracted, pointed, and of a deep red. Her *doctor* had given her laudanum and ether for her pain! and hot strong cinnamon tea to stop vomiting! According to her account she had an hemorrahagic diathesis from her youth up.

I commenced my treatment by interdicting all that had been done; and ordered cups to the epigastrium, and an enema of turpentine and castor oil. I directed them to saturate lemon juice with table salt, and to put a teaspoonful of this into half a pint of iced water, and to use this altogether for her drink. She immediately improved on this; but the case proved exceedingly protracted and intractable. On the 1st of May, I tried nitr. argenti with opium, but I had soon to desist, for it irritated the stomach. I then tried creasote in small doses, but it would not answer. On the fourth of May I determined to use the sulph. quiniæ, because I had observed for several days a paroxysm every afternoon, manifesting itself by a little coldness of the knees, and, crampy pain of the stomach, with distressing nausea and vomiting of blood; but her stomach would not tolerate the quinine. I then made up my mind to introduce the quinine, in large doses, into the rectum on the sixth of May. But early in the morning her husband came into my office, to tell me that she insisted upon having a homœopathic doctor. He attended her three days with great promises but no performance; when they applied to one of our old physicians, of the old school. On the 15th of May, they begged of me to take the case again in hand. Upon visiting her I

found her exceedingly prostrated and emaciated. I immediately proceeded to carry out my project; and from the 15th to the 21st of May, I had administered eighty grains of sulph. quiniæ, by enemata. On the 24th of May I left her fairly convalescent. I was absent nine days, and on the day before my return, she had a slight relapse; of this she is now cured by twenty grains of quinine, by enema.

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*Remarks on Medical Organization.* By HENRY HARTSHORNE, M. D., of Philadelphia.

A close attention to the proceedings of the recent National Convention at Richmond, has given rise to some reflections, which may be expressed briefly.

It seems to have become a general opinion, that the precise mode of representation by which the national body has been aggregated, is a mere "provisional government," suited to the emergency of its first formation, but inappropriate to its maturity. Several different plans proposed for its modification in 1851 were reported upon this year, by a committee appointed for the purpose; and the subject was then referred to another committee, which submitted a series of definite propositions for amending the constitution. These will come up for adoption or rejection next year. In the meantime, it is of some importance that the profession generally should form correct conclusions on the subject, so as to influence the decision of the Association.

We have no intention of occupying space with a discussion of the whole subject; but stop merely to observe, that all such reforms must be gradual, and that the committee of 1852 acted wisely in preferring, at present, an alteration in the *ratio* of representation of Colleges and Hospitals, to their entire exclusion.

But a topic to which more particular attention may be directed, is that of permanent membership. The propositions submitted by the committee of this year, and adopted as a report by the convention, to be finally acted upon in 1853, embrace a provision for the abolition of all permanent membership; leaving to the Association an interrupted life only,—having no members except the delegates appointed for the particular meeting of each year. Now, to this alteration, there exist many and weighty objections. In the first place, with regard to the permanent members already

created, it would seem to be a measure of questionable justice and right, summarily to deprive them of a privilege guaranteed by an original and fundamental regulation of the constitution under which they served. But, waiving this, we may take the ground of an established precedent, and assert that the *onus probandi* rests with the proposers of the innovation, to justify it, if they can. *What harm* is done by the existence of permanent memberships? What good will be effected by their abolition? These are the questions at issue. If they be answered negatively, it must be an error to make the change.

Now, as the permanent members, not delegates, have no vote, it is impossible for them to do any harm, unless by the power of speech, in the meetings of the Association. And the fact of their having this power of speech, need only increase the care and responsibility of each of the bodies sending delegates, that those sent may not be such as to act as either incendiaries or time-killers at any future time. The Association has, moreover, of course, the power to expel members who have proved themselves really unworthy.

But, it has been hinted, that the institution is not republican; that it creates a privileged class; an aristocracy. Not so, by any means;—because these privileges are within the reach of all, in turn, and should be made to rotate amongst all, whose characters and attainments are worthy of a place in the great American fellowship. If there be *any* comparison, where members compete, as must be the case to some extent in every profession and in every class, surely "οι αριστοι" *ought* to be those upon whom the principal choice should fall. The plan of constituting every member of every county society, ipso facto, member of the National Association, and conferring upon each a diploma to that effect, would have this result simply; that it would add one more to the number of formal certificates whose real value is in inverse proportion to their abundance, and which carry but little force in their assertions. Every member of a County Medical Society *is* a member of the great body of American Physicians; but what would be added to the fact by its inscription upon parchment? Or why should this fact interfere with the existence of a special privilege, for a particular purpose, delegated each year to some, though open in turn to all?

But the real argument of importance against the abolition of permanent memberships, is in connection with the appointment of the Special Committees of the Association, upon scientific subjects. How it would narrow the selection and efficiency of these, to carry out the proposed change! It was, indeed, with judgment, proposed this year to extend the service of the Committees on Epidemics to five years, to allow of the accumulation and digestion of more valuable facts. How, then, could this be done, if those appointed delegates one year, cease with that year to be members of the Association, and may happen never to be appointed again? The most cursory observation of the requirements and difficulties connected with these committees, must show the immense advantage of leaving, for their selection, the wider range allowed by the present order of the constitution.

But it is in immediate connection with the business of these committees of observation, that we would beg leave, with great diffidence, to offer a few farther suggestions. Their germ was found in a report read at Richmond, this year, by Worthington Hooker, M. D., of Connecticut, as chairman of a committee on Epidemics. In this was expressed, very clearly, the disappointment of the committee in their attempts to obtain full materials for their report by correspondence. But one or two answers were obtained, if we recollect rightly, out of a large number of letters and circulars addressed to physicians through an extended district. It was hence inferred, that a deficiency or inapplicability exists in the method by which these materials were sought; and a wish was expressed, that some mode of organization might be adopted, by which medical observation could be made more available to the same ends.

It appears to the writer, that nothing more important could be suggested in connection with the business of the National Association. The objects of this great organization of the profession would seem to be chiefly of two kinds: 1. Medico-legislative or ethical,—and 2. Scientific. And, as all medical legislation looks to the application of science as its subject of control, we may consider the advancement, diffusion, and legitimate use of medical knowledge to be the great ends of all professional organization. To *accumulate* and to *concentrate medical observation*, systematically, throughout so large a country as ours, would be

one of the greatest benefits it could confer. It affords also excellent opportunities for accomplishing this. It has been attempted, by the appointment of yearly committees, for instance, upon Epidemics. But how has this plan succeeded? Besides Dr. Hooker's, numerous other reports have asserted, upon the same and other occasions, a large preponderance of disappointment. The question then remains, whether some other plan cannot be devised, by which stimulus, facility, and universality may be given to the collection of data concerning disease, and their centralization ensured for the benefit of the whole country.

For this, it needs only a methodical and determined commencement, originating in the central body, and ramifying throughout its local constituencies. In other departments of science, (meteorology for instance) all are familiar with the extent and success of plans for the accumulation of detailed facts and observations, by the issuing of blank forms and circulars, to be filled up in scattered localities, and all returned to a central generalizing functionary or board. In the Report of the Committee on Hygiene, of the American Medical Association, published in its transactions for 1851, a recommendation, somewhat similar to this, is given, in pursuance of a suggestion from the Smithsonian Institute; but still very limited in its bearing. This committee "recommend that the blank forms furnished by the Institute should be distributed by the State Medical Societies to their members, with an earnest request that they should make faithful returns of all deaths occurring in their practice. That the returns received by the State Societies should be tabulated and arranged upon a general and uniform plan by each society,—and the returns and tables prepared from them sent to the Smithsonian Institution, where their compilation and arrangement into a more comprehensive form could be effected by a committee of that body."

The great utility of such an arrangement, if carried out, is manifest; all that we object to it is, that it is *less* useful, and less practicable and certain than the interests of the profession and the community demand. Why should such returns be confined to the cases of *fatal* disease? These alone may be appropriate to the compilations of the Smithsonian Institute,—but, for the National Medical Association, it would seem desirable to obtain

more ample and instructive results. And, again, the mode of distribution of the forms of inquiry appears to us to be incomplete. They are to be furnished by the State Medical Societies to their members. Such forms should, rather, be furnished by every County Society to each of its members, with instructions to return them, with answers, to a committee of the Society. This committee, then, forwarding its report to the State Society's committee, a summary or compilation of returns from all the counties within its domain might be in turn handed to the Committee of the National Association. If such returns, as to the nature, amount and results of prevailing diseases, were thus concentrated at stated periods in the hands of a committee serving the national body for five years, most important data could no doubt be thus obtained, in a shape more capable of accurate generalization than any less extended and systematic research could give. It is probable, also, that no difficulty would exist in the way of obtaining full and regular answers to such definite questions as might be thus uniformly circulated. Method, the subdivision of labor, and the use of the printing press, make many things easy, which, without these aids, might seem unattainable. At any rate, the plan now in vogue having failed, to a considerable extent at least, it would seem a matter of evident expediency to give trial to any other that appears at all likely to succeed.

We will conclude, by merely hinting at the kind of questions, which might form the basis of a circular of inquiry, to be distributed at stated periods (quarterly, for example) by a committee of each county Society, to its members.

1. What diseases have been most prevalent under your observation during the past three months?

2. Have any *peculiarities* attended the course of the prevalent maladies you have observed during that time?

3. Has any peculiarity, of type or tendency, affected the course of *ordinary diseases* during that time, within your limits?

4. Have any *new results of treatment* in disease come under your immediate notice during that period?

5. What has been the number of deaths in your practice during the past three months; and from what cause in each case?

If complete and universal returns were not at first obtained

to all these queries, we imagine that more at least would be produced than by the present plan; and the important effect would also follow from it, that practitioners would thus be stimulated and assisted in the task of recording constantly the main items of their observation, and of making them available for the common benefit of the profession and of humanity.

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*On Chloroform as an Emmenagogue.* By DAVID H. GIBSON, M. D., Fort Towson, Choctaw Nation.

Having nowhere seen, in the course of my professional reading, any allusions made to the use of chloroform, as an emmenagogue, I am induced to submit the following facts for publication, partly from a desire that relief may be afforded to the suffering, and partly from a sense of professional duty.

Cases I. II.—Occurring in the same person. In October last, Mrs. W——, having a violent headache, to obtain relief resorted to the inhalation of chloroform. Within an hour after the inhalation (which was but for a few seconds) she was flowing freely, and continued thus for *four days*. There was no irregularity of the function of menstruation in the succeeding month (Nov.), but another attack of headache supervening, she again had recourse to the chloroform, and in a half hour the menstrual secretion made its appearance, the discharge continuing for *five* days. In both instances, the chloroform was inhaled about ten days after the subsidence of her regular periods. Since the last inhalation, she has menstruated at her usual period. Mrs. W—— is slightly inclined to plethora, general health usually good, aged thirty-five years.

Case III.—In the absence of Mrs. W——, from home, her servant girl, having gotten hold of the chloroform, imitated Mrs. W.'s example. A like result was produced upon the girl, who menstruated for four days. The girl is very healthy and about thirty years of age. The inhalation was never renewed by her. In this case, the chloroform was inhaled two weeks prior to her usual period, at which time she again menstruated. Since then she has menstruated regularly.

Case IV.—Miss ——, aged 19—general health excellent—no deviation having ever taken place since her first menstrual period, was, during a visit to Mrs. ——, induced to inhale chloro-

form, through curiosity to experience the sensations produced by it. In a half hour the menstrual fluid made its appearance and the flow continued for four days. The inhalation in this instance was ten days antecedent to the regular period, with which it did not interfere. Mrs. W——, my informant in regard to the foregoing cases, is an intelligent and reliable lady.

Case V.—Came under my immediate observation. Was called to see Mrs. H——, found her suffering much from suppressed menstruation. To relieve urgent pain, ordered hot hip-bath, from which the patient experienced much relief. Waited three hours after the use of the bath, without recourse to any other means, having decided, as this was an opportune case, to exhibit the chloroform, which was done for *thirty* seconds. In *twenty* minutes after its administration, the patient was flowing freely and continued to do so for three days. Patient is of a weakly constitution, the result of much hardship. Age of the patient, about forty years. This case is the more remarkable from the fact that the patient has not menstruated for more than *eight* months.

The suppression was induced by causes not deemed necessary to relate at present. Prior to the suppression, she had been very regular for many years. Pregnancy has nothing to with the case, as the patient is not at this time, nor for many years past has she been in that condition.

I regret that I have not a greater number of cases to submit for the consideration of the profession. Being but a young practitioner, I am desirous that more experienced physicians should give the chloroform a trial, in order more fully, than my position will allow, to test its value as an emmenagogue; and diffident of my ability to account *correctly* for the "modus operandi" of the chloroform in the above cases, I shall without comment submit them to those who have better opportunities for investigation.

Before closing, however, I will present the following case. Miss——, aged 18 years, had an acute suppression of the menses, upon the first recurrence of the monthly period, subsequent to the age of puberty. Epileptic spasms quickly succeeded the suppression. Three years have elapsed since, and she is yet subject to these spasms, at longer or shorter intervals.

Within the last eight months, she was placed under my care. At one time, she will menstruate healthily—at another, there will not be the slightest appearance of menstruation—again, a leucorrhœa will take the place of the proper menstrual fluid. Sometimes, the leucorrhœal, as also the menstrual discharge, whichever it may be, will appear a week, sometimes two weeks antecedent to the regular period. Without entering into detail, as regards the treatment adopted in this case, I will submit the subjoined query. Upon the hypothesis, that the chloroform did act as an emmenagogue in the cases already related, how far would it comport with the safety of this epileptic patient to administer the chloroform? This question is predicated upon the belief, that, if the menstrual function were regularly performed, recovery from the epilepsy *might* take place. It is intended that the question shall refer more particularly to the epileptic condition, than to the irregularity of the menstrual function. I have no reason to suppose the existence of organic disease, either of the brain or uterus, in this patient.

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*A new instrument for cauterizing the Urethra.* By E. S. Cooper, M. D. Reported by L. C. Lane, M. D., of Peoria, Ill.

An instrument for cauterizing the urethra has been invented by Dr. Cooper of this place, which for facility of application and certainty of results is superior to all other means hitherto used, combined.

It consists of a copper catheter, with the end for half an inch a little smaller than the body, and perforated with several holes. This is introduced down to the stricture, and then filled with dilute nitric acid, which, acting on the copper, soon produces the nitrate, which coming in contact with the urethra through the holes, produces cauterization to the extent desired.

The strength of the solution and the length of time the instrument is permitted to remain, regulates the degree of cauterization completely. Dr. Cooper generally uses one third of nitric acid, and two of water, and permits the instrument to remain for one and a half minutes, though a much shorter time will often answer.

The shape of the instrument may be varied to suit the case; thus, when several strictures exist in the strait part of the urethra a

a strait catheter might be used, with holes at several places to correspond to their number and location.

Though great contrariety of opinion exists among medical men in regard to the degree of cauterization most valuable, this instrument commends itself alike to all; for whether it is believed that caustics should be applied boldly so as to cause the detachment of a slough, and thus physically enlarge the canal, or by a slighter application modify the action of the lining, the variations are easily made with it.

*Peoria, (Ill.) April 15th*, 1852.

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*On the Nutrition of Muscles during their Contraction.* By E. Brown-Sequard, M. D., of Paris.

It is generally admitted that when a muscle is in a state of powerful contraction, circulation, and consequently nutrition, are nearly arrested in it.

The well-known fact, that we are only able to maintain a permanent contraction in any of our muscles for a short time only, has been explained by a loss of strength occurring, from the supposed insufficiency of their nutrition. I have frequently performed a very simple experiment which proves that the cause of the rapid diminution of the power of our will, in that case, does not exist in the muscles themselves.

The experiment referred to has sometimes been made on my legs, sometimes on my arms; and it was conducted as follows: I took a weight in one of my hands, and kept my forearm in a state of flexion, so as to form with my arm an angle of only 25 or 30 degrees. In that condition some muscles, and more particularly the biceps, were in a state of permanent contraction. My ability to maintain my fore-arm in such a position, lasted between eight and twelve minutes. When I found it was completely impossible for me to keep my fore-arm in that position, an assistant applied the wires of an electro-magnetic machine to my shoulder and my fore-arm, so as to excite the biceps, and some other muscles. When, without any effort of my will, my fore-arm was maintained, nearly in the same position, during more than ten or even fifteen minutes.

After one or two minutes of galvanization, I occasionally tried

again the action of the will, and I found that it was able to act anew.

If the explanation be true, that the muscle is not sufficiently nourished, and loses, in a great measure, its irritability during its contraction, and that for this reason the will becomes unable to maintain the contraction longer than a certain time, then the action of galvanism ought to be incapable of producing the contraction. If galvanism is able to act as it does, it is because the circulation of blood, the nutrition, and consequently the muscular irritability, have been very little diminished in the contracted muscles.

I have made another experiment, proving, also, that nutrition continues to take place in muscles during their contraction. If the communication established by the nerves, between the muscles of a mammal and its spinal marrow, is left entire; and if the circulation is completely stopped in that limb, by an amputation of the leg at the hip-joint, then it is found that the muscles of that leg, under the excitation of a powerful galvanic apparatus, lose their irritability after ten or fifteen minutes. On the contrary, if the same galvanic excitation is applied to the muscles of the other leg of the same animal, it is found that the irirritability remains a long time without a marked diminution, and that it cannot be completely exhausted. It diminishes little by little, but never disappears entirely. Therefore, it is evident that nutrition may take place in muscles during powerful contraction.

Four distinct organs are active in the case of a voluntary muscular contraction. 1st, the brain, i. e. the organ of the will; 2dly, the spinal marrow; 3dly, certain nerves; 4thly, certain muscles. Which of these is the one which is deficient in the case of my first experiment? It is generally admitted that it is the muscular irritability. My experiments prove that it is not so. Consequently, it remains to know in which of the three other organs exists the deficiency. It appears to me that it is in the brain, because a great many experiments have demonstrated that the nerves and the spinal marrow, when put strongly in action, remain very active during a long time, provided that the circulation of blood continues in them.

In saying that the action of the brain is deficient, I do not mean the action of the whole brain, but that of the part of that

organ which is used in producing the contraction of these muscles, which are put in action.

From the preceding facts and reasonings I think I am justified in concluding:

1st. That it is the action of a part of the brain, and not the muscles, which is deficient, when our will is unable to maintain a permanent contraction in them.

2d. That circulation and nutrition are but little diminished in muscles strongly contracted.

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## CLINICAL REPORTS.

*Clinic of Jefferson Medical College. Service of* PROFESSOR DUNGLISON. *February 21st*, 1852.

(Reported by J. AITKEN MEIGS, M. D.)

I am, to-day, gentlemen, enabled, through the kindness of Mr. Bates, of this city, who is present, to bring before you three cases illustrative of the nature and treatment of that form of defective or imperfect speech, known as "stammering." It is a subject not often, perhaps, examined in a clinic, yet it is unquestionably a morbid condition, and no better opportunity than the present could offer itself to explain to you its phenomena, and to investigate their causes. Mr. Bates, who has the three persons now before you under his care, with that candor and liberality which ought to characterize every one connected directly or indirectly with our noble avocation, had expressed, when I proposed the matter to him, on his calling to explain his views on impediments of speech to me, his entire willingness to permit me not only to exhibit some of his cases to you, but also to be the expounder of the methods he adopts for its rectification; and, after having done so, I shall endeavor to deduce for you the inferences at which I have arrived in regard to the *modus operandi* of his means and appliances, and to the great principles of management that flow therefrom.

To-day, such an examination and inquiry are especially appropriate, as I have been engaged, during the past week, in

another place, in expounding to you the physiology of phonation, and the modes in which the different vocal sounds are elicited in the glottis, and modified in the vocal tube. The vowels, as you well know, flow without obstacle, and consequently demand no consideration. They are simple modifications of the voice formed in the larynx, and are uninterrupted by the organs —as the tongue, lips, &c.—in their passage through the vocal tube; while the consonants require different, and, at times, complex and delicate movements of the tube; and, as their name imports, have to be sounded with the vowels.

Stammering is a temporary inability to enunciate, freely and distinctly, certain letters at the commencement of one or more of the syllables of a word. There is a broken or interrupted emission of the voice in the act of articulation, and a consequent disconnection of the sounds; and you will understand, that the consonants must afford great obstacles to the stammerer, as they do, also, to children learning to talk; inasmuch as they are necessarily more difficult of enunciation than the vowels, in consequence of being dependent upon an ever-varying disposition and arrangement of the parts composing the vocal tube. Especially is this the case with that class of consonants known as explosives—as *b*, *d*, *t*, *g*, *k*, &c. These letters have of themselves no sound, or are mutes. They do not admit of a continuous pronunciation like the *h*, *m*, *n*, *f*, *s*, *r*, *l*, but require to be associated with a vowel sound, before they can be enunciated.

Much difference of sentiment, you will find, has existed in regard to the essential cause of stammering; and views have occasionally been entertained, which are certainly far from tenable. By some of the best physiologists, all the varieties have been referred to a spasmodic closure of the glottis producing a sudden arrestation of the issuing column of air. That this is not always the cause of the affection, however, is shown, as we shall see, by the cases before us. The great fault lies in the spasmodic action of certain of the muscles concerned in the production of the voice, and in articulation. Often, as in Chorea or St. Vitus's dance, the slightest agitation serves to aggravate, in the most painful degree, the abnormal action. Indeed, the affection may not improperly be—as it has been—called, "Chorea" or "St. Vitus's dance" of the voice. The stammerer, on attempting to

enunciate a word or syllable, experiences difficulty or resistance at the commencement, and having but an imperfect control over the voluntary muscles of the vocal apparatus, he at once loses all confidence in his ability to produce the sound required, and there consequently results an irregular or spasmodic action of those muscles, which, for a longer or shorter period and determined by the degree of spasm, effectually prevents enunciation. In the case of the explosive consonants, the total interruption of the breath, and the badly regulated and insufficient volition, give occasion to the most painful spasmodic efforts on the part of the muscles more immediately concerned in articulation. This may be even extended to the whole body, which is thrown into a most distressing state of agitation to overcome the obstacle. At length the spasm ceases with the accomplishment of the act of expiration. It will now, therefore, be understood, why the complete interruption to expiration in the enunciation of the explosive consonants should be the most common phenomenon observed in stammerers. In the case, however, of the continuous consonants, an additional phenomenon occurs, in the sound being prolonged by spastic action for a much longer time than necessary.

Mr. Bates, who is an ingenious and liberal mechanic, has been studying, for some time, the nature and treatment of these distressing impediments to speech, and, as I remarked, has been kind enough to bring here several of the persons now under his care, that you may see me examine them, and hear me explain the mechanical contrivances which he employs to obviate them. He was himself, for a long time, a most intense sufferer, and, in consequence, had his attention earnestly and assiduously directed to the discovery of some means of relief. He has overcome the difficulty in himself, and has happily succeeded in enabling others to do the same. In the three cases now before you, and which are at present under his guidance, the spasm manifestly affects different muscles; and hence, although in each person the same amount of difficulty is perhaps experienced in enunciation, the difficulty may concern different sets of letters. Thus the resistance may more prominently affect the labials, dento-labials, linguo-dentals, linguo-palatals, or gutturals; and hence the value

of the physiological knowledge which teaches us the intimate mode of their production.

[The patients were now brought, *seriatim*, before the class, and made to read words and syllables commencing with different consonants, especially with those of the explosive class.]

In the *first case*, (R—— G——, æt. 26,) the utterance of the explosive letters is arrested, and accompanied by a singular and sudden spasmodic protrusion of the lower lip. In the attempt to articulate such words as *Boston, bunch, boat, pill, pant, Pope*, &c. an arrestation of the sounding breath occurs, accompanied by such protrusion, and the patient is thus rendered incapable of completing or perfecting the sound.

In the *second case* (R—— S——, æt. 34) the voice is arrested, and there is a sudden and energetic contraction of the lips. The voice cannot escape from the mouth, and the difficulty here is with those words which contain the dentals, as *Thomas, Doctor, stone, &c.*

In the *third case* (D—— D——, æt. 25) there is spasm of the muscles that close the glottis, so that on attempting to pronounce the gutturals in such words as *grey, goose, great, king, court*, &c., the glottis is quickly and spasmodically closed, and the current of air prevented from issuing, except by jerks.

The great object to be accomplished in the treatment of these cases, is to overcome the proximate cause—the neurosis, or irregularity of innervation, indicated by the spastic condition of the muscular apparatus brought into play in the process of articulation. To effect this, it appeared to Mr. Bates, and it was confirmed by experiments instituted on himself whilst suffering under the infirmity, that if a plan could be imagined to prevent the total interruption of expiration, which occurs in these cases, the patient would feel confidence in his being able to elicit the particular sound, and in this manner the spasmodic efforts might be prevented. He accordingly invented several well devised instruments and arrangements, adapted to the different varieties of stammering; either by preventing the spasmodic action of the muscles concerned, or by restraining, by appropriate pressure, the irregular contractions of the muscles. For example, when the lower lip and chin, in the *first case*, were con-

fined by means of a simple broad bandage, like the one I show you, and pressure was thus exerted upon the spasmodically contracted musculus orbicularis oris of the lower lip, so as to prevent the protrusion of the lips, the letters, which were such stumbling blocks before, could be distinctly enunciated, and with a daily decreasing amount of hesitation.

For the *second case* Mr. Bates has contrived, as you here see, a small plate, fitting closely to the palate, and affording attachment to a light narrow tube, the posterior end of which opens into the mouth, looking towards the fauces, whilst the anterior projects between the lips. By this contrivance the current of air is made to be in part continuous, and the patient finds, to his surprise and delight, that he can produce the sound without any limitation other than his will.

The subject of the *third case* has been materially benefited, and is, indeed, in a fair way to be entirely cured of his unfortunate habit, by means of a neckerchief or cravat, in which is a little spring, pressing—as you observe—directly upon the projection of the thyroid cartilage, in such a manner as to relax the rima glottidis, by approximating the thyroid to the arytenoid cartilages; thus permitting the exit of air and preventing the spasmodic action of the muscles that close the glottis. The spring is so regulated, that the amount of pressure upon the thyroid cartilage can be increased or diminished, as occasion may require.

[The effects of these different forms of apparatus were exhibited on the stammerers before the class; and the action of each was clearly manifested.]

By such contrivances, which are simple, and adapted to the accomplishment of the object in view, Mr. Bates succeeds in effecting a great desideratum,—the *restoration of self-confidence*,—the want of which is a main obstacle to improvement in all such cases; for as soon as the patient becomes thoroughly and practically convinced that there is no difference between his vocal organs and those of his friends, whom he hears speak without difficulty or hesitation, he becomes inspired with confidence in himself, and his exertions are thenceforth the commencement of his restoration. Let it be, however, distinctly understood—and no one is more satisfied of this truth than Mr. Bates himself—that no appa-

ratus of this, or any kind, can, of itself, accomplish a cure. Nothing but a thorough system of practice and discipline, persevered in for a considerable period, can effect the work of restoration. The instrument merely infuses confidence. Withdraw it, and the case is left in the same condition as before. I can have no doubt, however, that with such a system, the stammerer may be amazingly benefited by the course pursued by Mr. Bates; but he must be thoroughly impressed with the fact, that time is one of the elements that must enter into his calculations, and that no plan can succeed without it.

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## BIBLIOGRAPHICAL NOTICES.

*Elements of Chemistry, including the Applications of the Science in the Arts.* By Thomas Graham, F. R. S., Professor of Chemistry in University College, London; &c., &c. *Second American, from an entirely revised and greatly enlarged English Edition; with numerous wood engravings.* Edited, with notes, by Robert Bridges, M. D., Professor of Chemistry in the Philadelphia College of Pharmacy, &c., &c. Philadelphia, Blanchard & Lea, 1852. Part I. pp. 430. Royal 8vo.

The appearance of a second American edition of this standard work on Chemistry may be regarded as, of itself, a strong evidence of its appreciation by the cis-Atlantic student. In no department of science has greater progress been made, and in none have more important facts and principles been developed, within the last quarter of a century, than in Chemistry. Especially is this remark true in reference to its application to Medicine, and chiefly, we may add, to *practical* Medicine. The time has not long passed by when Chemistry was scarcely suffered to claim allegiance with the other branches of medical science. It was looked upon merely as one of the departments of Natural Philosophy, with the leading principles and laws of which, every ac-

complished and well educated physician was expected to be acquainted, very much as he would be supposed to understand the principles of Mechanics or the laws of Light; but with no definite idea of its applicability to the practical part of his profession.

Well do we remember the almost universally prevalent feeling on the part of medical students in relation to the chemical lectures. Nearly without exception, was a distaste evinced for that particular branch of their studies, from their regarding it as almost an arbitrary arrangement of the schools, to be compelled to spend their time in the acquisition of a knowledge, the practical bearing of which on their future profession, they could not understand. No doubt much of this indifference of the student towards the chemical lectures was fostered by the too abstract method, then so prevalent, in which the subject was presented to him by his teachers. He would witness, perchance, the repetition of some of the brilliant experiments of Faraday on electricity, or of Melloni or Brewster on light; or he might be dazzled by the splendid proofs of the agency of oxygen gas in combustion; and even admire the beauty of the changes produced in the various decompositions of the metallic salts; but he never could realize that Chemistry constituted an integral—*indispensable* portion of his medical studies. He had, probably, a little while ago, during his collegiate term, listened to just such a course of lectures on Chemistry; and had then, as now, considered it as naturally allied to the course of mathematics or of classics, quite as much as to medicine proper.

Now, however, the case is widely different. The teacher of Chemistry has it in his power to illustrate almost every step in his course of lectures, by appeals to medical facts of the most vital importance to the physician. The so-called imponderables—Heat, Light, Electricity and Magnetism, are now shown to be most intimately concerned both in the phenomena of life, and in the treatment of disease. The experiments on the supporting power of oxygen to combustion now merely serve to illustrate and enforce the indispensable importance of that element of the atmosphere to every living being, in each act of life. The various saline and metallic compounds, the study of which formerly proved so irksome to the student, are

now invested with an unexpected interest in his eyes, when they are exhibited to him as constituting most valuable agents in the treatment of disease, or as possessing poisonous or antidotal properties.

But it is chiefly in the department of Organic Chemistry that the greatest advances have been made, and the most important facts developed. It is this portion of the subject that more especially interests the medical man. Here the most important and useful contributions have been made to the science and practice of medicine. Before the splendid discoveries of the organic chemist, how little was known of the true pathology of disease, and how necessarily meagre and empirical were our therapeutics! Now, however, what a flood of light has been thrown upon diseases of the blood and urine, for example, by organic chemistry! Indeed, it is not too much to assert, that the practitioner of the present day is more indebted to the developments made in Chemistry, for correct views in pathology and therapeutics, than to any, if not to all, of the sister branches of medicine.

Professor Graham's "Elements" have been so long and so favorably known to the profession, as to require no additional commendation on our part. In the words of the American editor, "the copious selection of facts from all reliable sources, and their judicious arrangement, render it a safe guide for the beginner; while the clear exposition of the theoretical points, and frequent references to special treatises, make it a valuable assistant to the more advanced student."

The American publishers have, as yet, only issued Part I. of the work. This embraces the consideration of the laws of Heat and Light, together with a very full and complete exposition of the principles of nomenclature, and the fundamental doctrines of Chemistry under the heads of Combining Proportions, Atomic Theory, Doctrine of Volumes, Isomorphism, Isomerism, Constitution of Salts, Chemical Affinity and Polarity, (including under the latter head the subject of Voltaic Electricity,) together with the new subject of the Atomic Volume of Solids. On these principles and doctrines of the science the author is particularly clear and explicit; and he may with great advantage, as well as confidence, be consulted by the advanced student. We need hardly

mention the fact that to Mr. Graham is due the discovery of the "law of the diffusion of gases;" and that we are indebted to his investigations for the interesting facts concerning phosphoric acid and the phosphates. Next in order, the simple non-metallic bodies are treated of, together with the compounds which they form with each other. Then follows the consideration of the metallic elements, which are treated of in Part I., only as far as the metallic bases of the earths, inclusive. The remainder of metals, together with the whole subject of Organic Chemistry, is reserved for Part II., which the publisher promises to have ready during the present year; and which may probably claim our notice at a future time.

The present edition is considerably larger than the former one, many portions of the work having undergone revision; and the number of illustrations is nearly doubled. The additions made by the editor are very judicious and useful; and we can most confidently recommend the work as one of the most complete and useful treatises on Chemistry with which we are acquainted.

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*A System of Operative Surgery, based upon the Practice of Surgeons in the United States, and comprising a Bibliographical Index and Historical Record of many of their Operations for a period of two hundred years.* By HENRY H. SMITH, M. D., &c. &c. *Illustrated by numerous steel plates.* Part III. (8vo. pp. 251 and 19 plates.) Philadelphia, 1852; Lippincott, Grambo & Co.

We find in this handsome volume a very respectable continuation of Dr. Smith's Operative Surgery. The superior style of paper, type and illustration, that proved so attractive a feature of the preceding parts, will fully sustain the reputation of the work in the part just issued. Nor do the letter-press contents appear to be any less creditable to the zeal and industry of their enterprising compiler, than were those of the pioneer portions of his publication.

The twenty chapters and nineteen plates which constitute Part Third, are devoted to the operations practised on the neck and trunk. They comprise, therefore, many of the most important and interesting topics of the whole book. The first

plate (29th of the series,) is occupied with the surgical anatomy of the neck. This is followed in the next (plate 30th) with a representation of instruments employed upon the œsophagus and trachea, including Bond's œsophagial forceps, Goddard's stomach pump, Physick's stomach tube, Nathan Smith's œsophagial hook, and other means and appliances of this kind. Plates 31st and 32nd respectively present views of operations performed on the trachea, the œsophagus and the larynx. Plate 33d exhibits some of the operations practised on the neck; and in plate 34th are depicted the "appearance and position of some of the tumors seen about the neck."

In plate 35th we are glad to find delineated, among other instruments, the aneurism needles of three of our Philadelphia surgeons—viz. that of Dr. Parrish, known as the Philadelphia needle, (although sometimes attributed to Dr. Mott, because that gentleman employs and recommends it), that of Dr. Horner and that of Dr. Gibson. Each of these has done good service in its time, and has been proved to be well adapted to the purpose for which it was designed.

Plates 36th and 37th present, in some twelve figures, large and small, certain operations upon the upper and lower portions of the neck, among which are included the ligature of the different arteries of those regions, and their respective relational anatomy, the strangulation of a large goitre, as effected by Liston, and the excision of the clavicle, as performed by Dr. Warren. Operations practised on the chest are well displayed in plate 38th; so likewise, in the eight following, (from 39 to 47 inclusive, chiefly copied from Bernard and Huette,) are those practised on the abdomen. These eight exhibit the opening of hepatic abscess, the treatment of wounds of the abdomen and intestines, the anatomical characteristics and relations of hernia in its different forms and conditions, together with the remedial management thereof, the operation for removal or production of artificial anus, and lastly, the ligature of the iliac arteries. The 48th plate of the series, and concluding illustration of Part Third, is occupied, in four figures, with the external characteristics of tumors of the neck and back.

So much for the engravings. We have endeavored, as briefly as possible in the foregoing enumeration, to give some idea of

the nature and amount of illustration provided by the author, in connection with his two hundred and fifty-one pages of letter-press discussions and descriptions. Imperfect as the analytical sketch of these illustrations evidently is, we regret our inability to afford, in any shape whatever, a similar account of the accompanying text.

The bibliographical index, with which the part commences, exhibits, in its references to two hundred and twenty-four separate papers on the different operations and other topics, an extent of laborious research which entitles Dr. Smith to the thanks of every student of American practice. Still it is a matter of regret that, with the exception of the citations given in the incidental foot notes in the course of the work, we have the periodical literature only to refer to, and that the more accessible as well as more permanent materials collected in the comparatively small number extant of genuine American books on Surgery, have not been allowed a place at least as conspicuous as that of the more ephemeral contents of the journals of the day.

Chapter 1st is occupied with the surgical anatomy of the neck. In chapter 2d, which treats of the parotid gland and its extirpation, we are glad to note that due honor is awarded to the late Dr. Geo. M'Clellan for his share in the establishment of this operation, "having done," to use the author's language, "more than any surgeon in the United States to demonstrate its reasonable character."

Chapters 3d, 4th, 5th and 6th are devoted, in regular order of succession, to the consideration of operations on the larynx and trachea (including cauterisation of the larynx, scarification of the glottis for œdema, tracheotomy and laryngotomy); to operations on the pharynx and œsophagus; to ditto for relief of deformities of the neck, whether from torticollis or burns, and lastly, to the study and management of tumors of the neck. Then we have chapter 7th on aneurisms in general; chapter 8th on aneurism of the carotid arteries; chapter 9th on the ligature of the innominata and subclavian arteries; chapter 10th, operations upon the chest; chapter 11th, ditto on the mammary gland; chapter 12th, do. on the walls of the thorax; chapter 13th, do. upon the abdomen; and chapter 14th on wounds in the abdomen.

The remaining six chapters are pretty much occupied with the subject of hernia in its different forms, relations and results, anatomical and surgical; and with the ligature of the iliac arteries, and the removal of tumors of the back and spinal canal.

With this meagre inventory we are forced to close the present notice. Want of time unhappily prevents us from dwelling upon many matters of doctrine and detail and historical interest, that would be likely to arrest a reader's attention in the hurried perusal which alone we have been able, for the present, to afford to it. We still hope to have the opportunity, with the entire work before us, of expressing more at large, and perhaps with less indulgence, our impression of the manner in which the author has acquitted himself of some portions of his onerous task. His undertaking is certainly an arduous one, and as praiseworthy as it is difficult—one that merits all the encouragement that can honestly be given to it in its progress, and the success of which we confess ourselves unwilling to impede by any hasty words of ours. We bid him God-speed, therefore, in his labors, and take our leave of him once more with many earnest wishes for their speedy and prosperous completion.

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*Obstetrics: the Science and the Art.* By CHARLES D. MEIGS, M. D., Professor of Midwifery and Diseases of Women and Children in Jefferson Medical College, at Philadelphia, &c. &c. Second edition, revised. Philadelphia, Blanchard & Lea, 1852.

Professor Meigs has long since taken the first rank among original writers on American medicine. His works on obstetrics and kindred subjects have rapidly gone through frequent editions, and have been well received both abroad and at home. There are about them a freshness, vivacity, and energy of style and thought, which, though sometimes degenerating into oddities and whimsicalities, have certainly proved attractive. Some of the critics have, indeed, carped at his manner, as wanting in the severity and dignity which should belong to the subject; but we suppose these rapidly succeeding editions of his books are a sufficient evidence that he has pitched his key to suit the ears of those for whom he writes.

The "Obstetrics" is an enlargement of the "Philadelphia Practice of Midwifery," which had previously gone through two editions. The first edition of the present work was published in 1849. "Though a large one, it was soon exhausted;" and of the edition before us, just issued, the author states that he has "considerably augmented it as to the text, endeavored to improve it by recasting some parts, cancelling others, and by an earnest attention to improvements in the literary execution of the whole." Our opinion of the first edition having been already expressed at some length, we must content ourselves here with briefly commending the book to the American student, as one of the best manuals on the subject extant, and adapted to his requirements. It were superfluous to say, that there is no better living teacher of the physiology, mechanism, therapeutics and surgery of obstetrics, than Dr. Meigs; and his book contains all that is known on these points, most graphically described, and aptly illustrated from the records of an experience, we presume now second to none in the world.

That Dr. Meigs entertains peculiar or rather extreme views on the pathology of some diseases of women and children, is well known to all who are conversant with the medical literature of the day. These views have been reiterated through most of his books; they have been discussed at some length in our columns; and we feel called upon here merely to say that we remain among those who cannot subscribe to all his doctrines "upon the nature, seats, causes and treatment of puerperal or child-bed fever," particularly as to its non-contagiousness.

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*The Medical Student's Vade Mecum: a Compendium of Anatomy, Physiology, Chemistry, Materia Medica and Pharmacy, Surgery, Obstetrics, Practice of Medicine, Diseases of the Skin, Poisons, &c. &c.* By GEORGE MENDENHALL, M.D., Third edition. Philadelphia, Lindsay & Blakiston, 1852.

Of the third edition, lately issued, of this useful work, we have great pleasure in echoing the generally expressed favorable opinion of the medical press. It is, in every respect, well arranged and well executed, and deserves the popularity which has been established by "the rapid sale of the two former editions." As

regards the form of "question and answer," by which this work is characterised, our opinion has been that it is needlessly cumbersome, occupying space that might be better employed. We presume, however, from its having been retained here, through three editions, that it is not unacceptable to the class for whom it is intended.

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# THE MEDICAL EXAMINER.

## PHILADELPHIA, JULY, 1852.

### EXPLANATION.

We have been concerned to learn, that some expressions, which occur in a communication from Dr. E. B. GARDETTE, of this city, published in our last number, have been the subject of misconstruction. A letter has been addressed to us by a gentleman from Baltimore, in which exception is taken to allusions indulged in by Dr. GARDETTE in the communication in question, inreference to hospitalities tendered him, on his visit to that city to attend the examination of the Dental College. That these allusions should have given offence to the gentleman who addresses us, we most sincerely regret. The language complained of, did not certainly strike us, on going through the press, as susceptible of an offensive interpretation. We must admit, however, that there are grounds for a call for explanation as to the allusions. We beg to express unreservedly our own regret that anything, appearing in the columns of this journal, should have pained the feelings of a highly respected correspondent from Baltimore. And we are authorized to add, on the part of Dr. Gardette, a no less unqualified expression of regret in the matter; and to disclaim, most pointedly in his behalf, any intention of attributing a sinister or unworthy design to the Faculty of the Dental College of Baltimore in their personal attentions to him, on his visit to that city.

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In a recent number, we announced the resignation of Dr. JOHN BELL from the chair of Theory and Practice of Medicine, in Ohio Medical College, and his proposed return to his former residence in Philadelphia. We have great pleasure in laying before our readers, the following resolutions, passed by the several institutions with which he was connected,

on the occasion of his leaving them, as evidence of the high esteem in which he was held by them.

*Ohio Medical College.*

*Resolved*, That this Board has received with regret the resignation of Professor John Bell, of the chair of Theory and Practice in the Medical College of Ohio:—with regret for the loss which the Institution will sustain in being deprived of his valuable services, and with still more regret that loss of health should be the cause of his resignation of a seat which he is so well qualified to fill with honor to himself and this Institution; and with usefulness to his pupils.

*Resolved*, That this Board tender to Professor Bell their thanks for his past services, and their best wishes for his speedy restoration to health, and to the enjoyment of happiness in the ability to continue his usefulness to the Profession, and to society in general.

*Cincinnati Medical Society.*

*Whereas*, We are informed of the resignation of the chair of Theory and Practice of Medicine in the Medical College of Ohio, by our distinguished friend and professional brother, Professor John Bell, and of his intended return to his former home, Philadelphia, therefore

*Resolved*, That his eminent literary and scientific attainments, and parctical abilities, give full evidence of his entire devotion to the profession:—that we sincerely regret the loss of so valuable a member of our Society, and that it may be long before the vacancy thus created will be filled by one so truly worthy of the appellation of *scholar*, *physician*, *gentlemen* and *brother*.

*Resolved*, That a committee of three be appointed to invite Professor Bell to deliver a parting address to the profession and citizens, at such time and place as may be agreed upon; and to present him these resolutions as a token of our high esteem and sincere regard.*

*Cincinnati Medico-Chirurgical Society.*

*Whereas*, This Society has learned that Professor John Bell has resigned his place in the Medical College of Ohio, and is about to remove his residence again to Philadelphia, therefore be it

*Resolved*, That it is with profound regret that we have heard of his determination to withdraw from our city and profession.

*Resolved further*, That this Society, having a high appreciation of large scholarship, great erudition, high medical attainment, and ripe judgment, as of the greatest importance in elevating our common profession, and making it more influential and powerful in overcoming and destroying the various empirical systems of our city, and the West generally, part with our distinguished friend with still more difficulty and regret.

* This lecture was not printed owing to the immediate departure of Dr. Bell from Cincinnati. We hope, however, that we may still have the pleasure of seeing it, or, still better, of hearing ii.—Eds.

*Resolved further*, That as this Society freely endorses the code of ethics of the American Medical Association, as containing noble, wise, and lofty sentiment, and calculated in an eminent degree to elevate our profession, it feels more deeply the loss of Professor Bell, who, from his distinguished position and gentlemanly bearing, would have been able to give great moral force to its enforcement, and to inspire our profession with general respect and strict observance of it.

*Resolved*, That Professor Bell be invited to deliver a valedictory address to this Society before his departure.

*Resolved*, That the Secretary be, and is hereby instructed to transmit a copy of these resolutions to Professor Bell, and also to furnish a copy to the Western Lancet for publication.

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## MEDICAL NEWS.

*Extract from an Address delivered by* Dr. SAMUEL GRIMES, of Delphi, *at New Abany, May 20th, 1852, before the Indiana Medical Convention.*

"Before we blame with asperity the wrong bias of a portion of the community towards medical heresies and quackery, we, of the profession, ought to have the consciousness that we are clearly distinguishable from the whole tribe of pretenders, by our superior attainments, not only in medicine, but in general literature and science, as well as by our greater readiness of resource at a time of difficulty and danger in the sick room. The mere fact of our holding a diploma in Latin, while others put up with one in English, and of our believing in one doctrine, while they are clamorous in favor of another, will give us no valid claim on the world for higher professional rank, and greater skill in *practice*. We must rest our claims on something more substantive and appreciable than this. We may dwell with allowable pride on the antiquity, and learning, and signal philanthropy of the great family, with Hippocrates at its head, to which we *belong*. But the pride of ancestry becomes ridiculous if it is not sustained by contemporary merit. To be received in the great brotherhood and decorated with the order of merit, we ought to be able to show that we underwent early preparation by a good academic or collegiate education; and early training afterwards, by elementary medical instruction, in the office of an experienced physician, before we were enrolled and became regular and faithful attendants in a Medical School of repute and competent organization.

"Some, perhaps many of us, will confess, with regret, that we have not been able to comply with these requisites, in all their particulars. But, surely, this does not imply that we should withhold our advice and

assistance, in order to remove the obstacles from the path of those coming after us, which embarrassed and impeded our own course. The times are more propitious to the zealous student now than they were in our early days; and, consequently, there is less excuse now than then for neglect, on the part of a parent, to procure for his son a good preparatory education, and on that of a physician to impart to his pupil suitable elementary instruction in medicine. Nor need any of us stand excused from the discharge of his duty to his pupil, if he received any such in his office, by the plea of his own defective attainments. However limited may be our reading and knowledge of medical literature, we can still point out to the young student a good book on each of the different branches of medicine; and early familiarize him with the qualities of drugs, and, to a certain extent, their pharmaceutical combinations—while we give him opportunities of ascertaining their therapeutical value. Though ourselves not learned in Climatology, we can, without difficulty put him in the way of observing and recording the characters of the successive seasons, and the modifications caused by the particular locality in which we reside. Though ignorant of Greek, thanks to the Sydenham Society, we can put into his hands a good translation of the admirable essay of Hippocrates on *Air, Water,* and *Places,* and read with our student the interesting and instructive volume on the climate of our own great valley, by Dr. *Drake.*

"So in Botany, even if we are not able ourselves to teach, we might, without much difficulty, set an example to our students of learning its elements, and exhort them to prosecute their inquiries in this direction, combining with them the study of vegetable physiology. Continually surrounded by the productions of nature, the country student has stronger incitements, and at the same time, greater facilities, to become acquainted with Natural History than the resident of a city.

"In pursuing the course here recommended, we shall discharge not only our duty to our students, but, also, to the several Medical Colleges to which they will resort after leaving us, for on the proper elementary instruction which these young men have received at our hands, will mainly depend their successful indoctrination in the higher principles and rational practice of Medicine by the professors in the schools. These gentlemen are continually embarrassed in their teachings by not knowing what foundation has been laid by the private teachers, or by those who ought to have been such; nor how far they may take for granted an acquaintance with elementary truths on the part of their youthful auditors. One professor, for fear of going beyond the comprehension of his class, contents himself with uttering the merest *common places;* another aims

to bring up his hearers to his own elevated standard. If it be said that the first is the most popular lecturer, does not the fact show the unpreparedness of the students for a course of instruction such as they ought to receive, and such as an able and conscientious professor ought to be able to give.

"The dignity, learning, elevated standing, and successful teachings of the Faculties of our Medical Colleges cannot be matters of indifference to us. They are, in one sense, our representative, in another our auxiliaries; and whatever effects their reputation must re-act on the entire body of the profession. We cannot, therefore, be supposed to look with indifference on the organization of these colleges, nor be expected to give any countenance to those with the entire competency of whose Faculties we are not fully satisfied. A new Medical School cannot, like a new store, or a new manufactory, or a new line of stages, be patronized, merely because it is new, and to encourage trade and reduce prices, by competition. Nor can personal regards nor sectional pride furnish an apology for our sending our students, or otherwise giving our countenance to a school, formed in haste out of incongruous materials, and as if in a spirit of mere business speculation. The medical profession, at large, must divide the responsibility with the Medical Schools for the attainment and fitness of the graduates sent out annually from these latter, as candidates for practic and public patronage. If we send to the Medical Colleges crude materials, it cannot be expected that they should be at once fashioned into shape and harmonious proportions. If we send to them ignorant minds, we have no right to suppose that these will be instructed and taught the principles of medical logic, and philosophy in the course of a few months.

"I repeat, that we have a large share of responsibility for the manner in which Medical education is conducted. We send our students to be educated, we influence them in their selection of the school to which they go. We, therefore, mistake greatly our position, if we think that we can assume the office of judges and critics of Medical Schools without our participating in their cares and difficulties, and giving our counsel for their protection and guidance, when they come up to what we believe to be a good standard of teaching. The best assistance we can give them, is to send them students properly prepared to avail themselves of the higher course of instruction which the professors are ready to go through with. The best counsel we can offer to the professors, is for them to abide by their own convictions of duty in keeping up an elevated standard of medical attainments for their students, and taking adequate time for imparting their knowledge to these latter. Not only are there

more branches of medicine to be taught now, but each branch is much richer in details, than formerly; and hence it is clear that more time is required to teach them than formerly was requisite.

"It may be asked, whether we are ourselves, either by education or subsequent reading, competent judges, in the premises, of what is necessary on the score of Medical Education? It may be that many of us are not, in this sense *competent*, but the very consciousness of deficiences, and experience of what we have suffered in consequence may naturally impel us to seek reform, and create a desire that others coming after us should enjoy advantages of which we were deprived.

"We may, however, all of us, in this age of periodical literature and abundant publications, readily procure the desired information on many subjects of immediate interest. The calls on our time and attention in the cares of practice, and especially country practice, must always prevent our being regular and systematic readers: but if we are bent on turning all the odd hours to account, and have a good medical journal, and the best monograph at our elbow, we shall be able to keep up, to a respectable extent, with the progress of our science, at least so far as to appreciate its extent and chief bearings, and the improvements in practice. In this way we can do justice to ourselves and to our students, and confer, if need be, understandingly with our brethren, the members of the Faculty of Medical Colleges.

"In order to give effect to our wishes and intentions on all that relates to the improvement and elevation of our profession, we must act through our State Society *organization*. Indiana, in this respect, will not, I hope, be backward in rivaling her sister States—some of which, as Pennsylvania, New York and Tennessee, furnish, in their transactions, commendable examples for imitation. For this purpose it is all important that the County Societies should be well organized—as on their efficiency will depend the weight and character of the State Society. From each of them we may expect an account of the medical topography of the county, and of the diseases to which it is subject in successive seasons, together with those of an evidently endemic nature. Clearness and brevity should be consulted in these descriptions and histories, if it is desired to render them acceptable to hearers or readers, and creditable to their authors.

"I would recommend our Society to petition the State Legislature for an act requiring a registration of births, deaths, and marriages, so that we may be furnished with valuable *vital statistics*, and which will serve as a basis for many exceedingly interesting inquiries both of medical and general value.

"As far as lies in our power we shall, it is to be hoped, be, all of us, willing to give weight and efficiency to the recommendations of the National Medical Association, to which we are already indebted for an excellent Code of Ethics, and for various Reports on the Literature and Practice of Medicine, and the means of elevating the standard of Medical Education. If the State and County Societies act in unison with the National Association or *Congress*, the best results will follow, not only to our profession, but to the nation at large."

PRESENT TO THE ROYAL COLLEGE OF SURGEONS.—Mr. Abbott Lawrence, the United States Minister at London, having stated to the Lords Commissioners of her Majesty's Treasury that two cases have arrived from New York, addressed to him, and containing fossils sent by Dr. John C. Warren of Boston, United States, for presentation to the Royal College of Surgeons, London,—their Lordships have given directions to the proper authorities of the revenue to permit their free delivery for the purpose stated.—*London Lancet.*

OPPOSITION TO VACCINATION.—Such is either the unwillingness or carelessness of parents regarding the vaccination of their children, in Great Britain, that medical men are compelled to seek the interference of clergymen to induce parents to have their children vaccinated. The Irish especially are opposed to the operation.—*Ibid.*

THE CONCOURS FOR THE CHAIR OF HYGIENE, in the Faculty of Medicine of Paris, which we noticed in our Journal of March 6, has terminated with the appointment of M. Bouchardat, Pharmacien-en-Chef to the Hôtel Dieu, to the vacant professorship. We learn, also, that M. le Docteur Dupré has recently been elected to the Chair of Medicine in the Faculty of Medicine of Montpellier.—*Lond. Med. Times.*

PROGRESS OF EPIDEMICS.—The small-pox is spreading in Jamaica. In the parish of St. Anne, where it had only been prevalent two or three weeks, there were upwards of 4000 cases. The greatest destitution prevailed, and, in many instances, poor persons perished for the want of assistance and of medical care. In Kingston there are several cases. The cholera, which was lately reported to be exceedingly fatal at Bokhara, is now stated to have broken out in some places in Upper Silesia, a part of the Prussian kingdom, where great misery prevails. If this be really the case, and it should extend, as it will in all probability, the mortality will be dreadful, for the dearth and misery in many parts of Germany

have, of late, been on the most fearful scale, so that the bodies of dead dogs, in a semi-putrescent state, have been devoured by the starving inhabitants.—*Ibid.*

OBITUARY.—Dr. JOHN DALRYMPLE, the able microscopist and oculist, of London, died on the 2nd of May last.

A medical man in Breslau has been fined 40 thalers for having neglected to attend to a patient who sent for him. (!)

M. CHOMEL.—Politics even affect the peaceable science of Medicine. M. Chomel, the celebrated Parisian physician, having refused to take the oath to the President, required by the *quasi*-Constitution, has vacated his Professorship at the College of Medicine.

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# RECORD OF MEDICAL SCIENCE.

## MATERIA MEDICA AND THERAPEUTICS.

*On the Basis of the Eau Medicinale D'Husson.* By THOMAS BUSHELL, ESQ.—The subject which I am about to bring under the notice of the Pharmaceutical Society relates to the history of a very powerful article of the Materia Medica, the "EAU MEDICINALE D'HUSSON," which, although now obsolete, is still frequently referred to as the form in which colchicum was first introduced into medical practice; and, I trust, I shall be excused for occupying the attention of the meeting for a few minutes in relating some circumstances contributing to establish the identity of the *Colchicum Autumnale* as the basis of that remedy which enjoyed so great a repute about half a century ago as a proprietary specific for the treatment of gout and rheumatism.

A few days since I made inquiry of one of the chief vendors of patent medicines, at the west end of the town, if they now sold the Eau Medicinale; I was informed that it had not been inquired for for many years, but that they had been accustomed, when it was in demand, to receive it from a foreign perfumer in Bond Street. I then called at this house, and was politely informed that they were the proprietors and vendors of the Eau Medicinale D'Husson, but that they had not sold any for years, and that it had gone quite out of date. About four or five years ago they sold three or four bottles. I requested to be allowed to examine the remedy, and to see in what way it was sold or made up. After a little time two or three bottles were discovered; they held about two drachms, and were simply labelled "Eau Medicinale D'Husson." Printed wrappers, descriptive of its powers, were not at hand, and the parties seemed to have

quite forgotten the doses in which it was administered. They informed me that the price was now nine shillings and sixpence, but was originally twenty-two shillings. The bottles were short and squat, quite curiosities in their way, and I could not resist revolving in my mind the great alteration which time and circumstances had made in the repute and consequent sale of this remedy, which at one time must have realized a splendid income to its proprietor.

The earliest medical notice I can find of the Eau Medicinale, is by Dr. Jones, in the year 1810, who had been on the continent in the years 1802 and 1803, with a gentleman who was a great sufferer from gout, and had then heard of the remedy of Husson, and which, on his return home in the year 1805, he was induced to make use of. He derived so much benefit from it, that from this time it made great advances as a remedy in England, and, to quote the words of the editor of the *Edinburgh Medical and Surgical Journal*, "noblemen and philosophers concurred in sounding its praises, if not in dancing hornpipes, in testimony of the new agility and flexibility of toe with which it had endowed them; and the President of the Royal Society, Sir Joseph Banks, who experienced the most extraordinary deliverance from his arch enemy, is said to have made it almost his pocket companion." It now became a great desideratum to ascertain its composition. Rhododendron, Chrysanthemum, Digitalis purpurea and lutea, Tobacco, Elaterium with opium, and many other plants, supposed to be analogous in their action to the magic water, were stated to form its basis.

Dr. Pereira states in his *Materia Medica*:

"The circumstances which have led to the extensive employment of colchicum in gout, are the following: About seventy years ago, M. Husson, a military officer in the service of the king of France, discovered, as he informs us, a plant possessed of extraordinary virtues in the cure of various diseases. From this plant he prepared a remedy called Eau Medicinale, which acquired great celebrity for abating the pain, and cutting short the paroxysm of gout. Various attempts were made to discover the nature of its active principle. In 1782, Messrs. Cadet and Parmentier declared that it contained no metallic or mineral substance, and that it was a vinous infusion of some bitter plant or plants. Alyon asserted that it was prepared with gratiola; Mr. Moore that it was a vinous infusion of white hellebore with laudanum; Mr. Want that it was a vinous infusion of colchicum. Although most writers have adopted Mr. Want's opinion, we should bear in mind that the proofs hitherto offered of its correctness, viz., analogy of effect, cannot be admitted to be conclusive, as is well shown by the fact that they have been advanced in favor of the identity of other medicines with the Eau Medicinale."

I should apologize for making so long an extract from Dr. Pereira's work, but as it contains a perfect epitome of all I have ever seen on the subject of the so-called gout specific, and as it leaves the question of the identity of its basis open to further inquiry, I hope that the circumstantial evidence which I now propose to lay before the Society, may somewhat clear up the point.

Mr. Want published his opinion in the *Medical and Physical Journal*,

vol. xxxii., in the year 1814; and it was two or three years after that time, at the commencement of my apprenticeship, I was directed to prepare a preparation of colchicum in rum (four ounces of the dried cormus to a pint.) I was residing close to Covent Garden Market, and frequently had conversations on plants, &c., with the late Mr. Grimley. the herbalist, to whom I applied for the colchicum. Mr. Grimley inquired of me if I knew how it was that the use of this remedy was discovered by Mr. Want? He then related the following circumstance:—Mr. Want had returned home from visiting patients, and met his wife on the stairs, and told her that her father had been seized with a violent attack of the gout. The nursemaid, who was standing by, stated that she once lived with a little French gentleman, who prepared a secret remedy for the cure of the gout, the Eau Medicinale; that he was accustomed to carry on his operations at the upper part of the house; and that there was a door on the staircase which he always kept locked, but that she had managed to obtain a little bit of one of the articles he made use of, and that she then had it by her locked up in her box. Mr. W. had not much difficulty in gaining a sight of this treasure. It was unknown to him, but he at once proceeded to Covent Garden Market, and applied to my informant, Mr. Grimley, to ascertain if he could recognize the portion of bulb. Mr. G. pronounced it colchicum; and, to Mr. Want's further inquiry, informed him, that the only person who ever applied to them for it was a little Frenchman, and that he was accustomed to order from a cwt. to a cwt. and a half more than once in the season; that he adopted great precaution to prevent their obtaining a knowledge of what he did with it and from whence he came; that he always made inquiry if they had it ready, paid the amount charged, then brought a porter, who carried it to a hackney-coach which he had in waiting, and which immediately drove off with its precious charge—for precious it was, only to be compared to a lump of the Californian or Australian mineral, as its preparation sold for its weight in gold (two drachms twenty-two shillings.) This relation, although occurring about three or four and thirty years ago, is quite fresh in my memory. I have related it to many, and about seven years ago I was in attendance on the late Earl Thanet, who suffered much from gout, and had a great objection to take colchicum. I happened to mention this little history, when he said, "You are quite right." I met that little Frenchman repeatedly years ago at the late Duke of Queensberry's, who was a martyr to gout, and to whom he used to administer the Eau Medicinale, he being the preparer of it. In the course of inquiry I have also found good reason to suppose that this little Frenchman was a well-known foreign perfumer, and has been dead upwards of twenty years, the founder of the house who now profess to be the proprietors of this once celebrated remedy.

I have stated that it was in the thirty-second volume of the *Medical and Physical Journal*, that Mr. Want first made public his discovery of the basis of the Eau Medicinale D'Husson, but I find on further reference that it was not in a medical but in a popular journal, the *Monthly*, that he had previously announced it. I should take up too

much of the time of the Society, if I entered into the controversies which took place at this period, with respect to the reliance which could be placed upon this beyond the numerous other drugs which had been as confidently declared to form its active ingredient, and it was the opinion of many that ere long it would be consigned to the tomb of the Capulets. I find, also, that a charge was made against Mr. Want, by an anonymous correspondent, that he had gained a knowledge of its basis by means somewhat similar to what I have now related, but which he denied, stating that he had obtained the first hint from Alexander, of Tralles, who recommended a remedy, "Hermodactylon," for the cure of gout, and with the effects of which the Colchicum Autumnale entirely corresponded; and that this plant had entered into many gout remedies that had become obsolete. All I am now desirous to say on this subject is, that the blue chamber being once penetrated, its mysteries might be readily compared with those which had preceded, but I believe the key was obtained in the manner I have related to the Society.

The present holders of the recipe for the Eau Medicinale, were so ignorant of its powers, as to inform me that two or three drops were a dose. I find that the usual dose was half a bottle, to be repeated, if the effect was not apparent, in four or six hours, but it was not uncommon for parties accustomed to its use, to take the whole two drachms, and repeated cases are on record of its powerful and dangerous effects; even life in some instances fell a sacrifice to its imprudent exhibition; and such was the experience also with the Colchicum Autumnale when first brought into practice, as it was considered to be a specific, and administered accordingly. This is not the place for entering into the therapeutical action of this valuable and potent plant, but its botanical and chemical characters are highly deserving the attention of the Members, and, combined with its Pharmaceutical preparations, might form matter for most interesting discussion.

There is a galenical compound in one of the French codexes called Eau Colchique D'Husson, prepared as follows:—Dry Colchicum, 60; Sherry, 125; twenty drops in a glass of *eau sucree* in gout and rheumatism; and there is a remark that this will be observed to differ from the tincture or anti-gout drops of Want, which has been given as the Eau Medicinale. Mr. Want's first recommendation was four ounces of the fresh root sliced to half a pint of proof spirit.

Before I conclude, I must direct your attention to the observations of Dr. Maclagan, lately published in the *Monthly Journal of Medical Science*, Edinburgh, and from which your own valuable Journal of this month has an extract. I observe that Dr. Maclagan states that the flowers of colchicum are supposed to be the part of the plant used in the preparation of the Eau Medicinale.—*London Pharm. Jour., April* 1852.

## PATHOLOGY AND PRACTICE OF MEDICINE.

ST. BARTHOLOMEW'S HOSPITAL.—*Aneurism by Anastomosis; Death by Chloroform.* (Under the care of Mr. LLOYD.)—We regret to apprise our readers that the use of chloroform has proved fatal in this case. It will be clearly shown by the subjoined facts that no blame whatever can attach to any one concerned, the more so as the patient had, on the previous occasion, inhaled chloroform during a considerable time without any ill effects. We refrain from any comments, as we shall have occasion to return to the case when the post-mortem examination shall have been made.

Thomas Hayward, a rather spare and weakly man, aged twenty three, was admitted on Thursday, the 29th of January, 1852, under the charge of Mr. Lloyd.

The patient applied to the hospital for an aneurism by anastomosis occupying the whole of the right ear, and also to a considerable extent the soft parts in front and behind that organ. On and behind the ear, the vascular growth was elevated so as to form a large tumor. The integuments of the ear, as well as the diseased mass, were of a deep purple color. In every part there was a strong pulsation, as well as a loud aneurismal murmur; the temperature, however, was much the same as that of the surrounding parts. Projecting from the meatus there was a polypus or large fungus, whence issued a copious purulent discharge, which was often tinged with blood. Pain in the head was complained of, but no unpleasant sensations had been felt in the tumor itself.

The disease had existed since the patient was four years of age; various remedial means had been employed at different times, but without benefit. The patient had been treated at some of the London hospitals, where setons were introduced into different parts of the tumor, and portions of it enclosed with silver wires, which were now and then twisted so as to tighten them; but these measures were of no avail, and at length the patient was discharged as incurable.

Mr. Lloyd, not deeming the cure hopeless, and having consulted with his colleagues, determined to attempt the obliteration of the tumor—first, by deligation of the principal arterial branches in direct communication with the diseased mass, and afterwards by pressure applied to different parts in succession. With this view, on the 14th of February, 1852, the patient was placed under the influence of chloroform, and with the assistance of Messrs. Wormald and Paget, Mr. Lloyd placed a ligature around the temporal artery, just as it passes over the zygoma; other ligatures were applied in such situations as it was considered would tend most to cut off the supply of blood from the part affected, and pressure afterwards used before and behind the ear. The operation lasted, as was expected, for a long time, and the patient was kept under the influence of chloroform for *half an hour or more.* From the effect of the anæsthetic agent he recovered quickly, and when visited half an hour afterwards, he was found lying comfortably in his bed, and on being asked how he was, he answered, "Very well," and smilingly added that he

was very thankful the operation had been performed, and hoped it could soon be repeated.

After this, everything went on favorably: the tumor became much diminished in size, and the pulsation much lessened. But on further examination, a large artery was found beating very strongly, between the mastoid process and the ramus of the jaw, pressure on which part completely arrested the pulsation throughout the diseased growth. On this vessel, therefore, Mr. Lloyd determined to place a ligature, and appointed the 17th of March for the purpose.

The patient was taken into the theatre of the hospital, placed on the operating-table, and chloroform administered as on the former occasion. The anæsthetic fluid now used was from the same bottle as had been employed before, and the apparatus was also the same as usual. The chloroform was administered by one of Mr. Lloyd's dressers, who well understood, and had long had experience in its use. A gentleman of great experience, who has been a long time at the hospital, and two years house-surgeon, was watching the patient, and marking the state of the pulse. Other gentlemen were also assisting.

In from five to ten minutes the usual effect was produced, the patient having previously struggled much. The operation was then commenced, but no sooner had Mr. Lloyd cut through the skin, than it was stated that the pulse had suddenly stopped.

The chloroform was at once removed, but in a few seconds the patient had ceased to breathe, and no pulsation could be felt in any of the arteries, or at the heart. Artificial respiration, as well as percussion and compression of the different parts of the body, were immediately employed, with energy; and after continuing the means for a short time, the circulation was observed to be returning, and the act of respiration was several times performed. The state of inanimation, however, speedily returned; but by the employment of the same means as before, with the use also of galvanism, the circulation and respiration were again restored. But the patient fell quickly into the same state as at first, and was again brought round by the same means. In a few moments, the patient relapsed for the third time, when one of Mr. Lloyd's colleagues, coming into the theatre, recommended that the external jugular vein, which on the right side was turgid, should be opened, that tracheotomy should be performed, and the lungs inflated. These means were accordingly had recourse to.

The patient was besides placed in a warm bath at the temperture of 104°, artificial respiration being kept up all the time, and friction employed. All, however, was of no avail, and it soon became evident that life was irrecoverably gone.

The resuscitating measures had been continued for more than an hour. Ammonia had been applied to the nostrils, but no attempt was made to introduce any stimuli into the stomach, as Mr. Lloyd feared any liquid placed in the mouth might pass into the larynx, and occasion instant suffocation.—*Lancet, March 20th*, 1852.

*The Mechanism of Bronchophony.* By W. H. WALSHE, M.D., Professor of the Principles and Practice of Medicine, University College, London, &c.

§ I. The physical conditions in which morbid bronchophony is observable are:

1. Increased density of the pulmonary tissue either surrounding pervious bronchi, or forming a medium of communication between pervious bronchi and the spot at the thoracic surface examined,—whether that increase of density be caused by solid, semi-solid, or, perhaps, even liquid infiltration of the parenchyma.

2. Increased density of texture, produced by extraneous pressure.

3. Presence of any solid extra-pulmonary formation in such a situation as to form a connecting link between the surface examined and a bronchus of some calibre.

4. Increased width and hypertrophy of the substance of the bronchial tubes.

5. Diminished density of the lung, as in the rarefaction of vesicular emphysema.

The diseases referable to the first head are the *common* causes of bronchophony; but any hypothesis in explanation of the phenomenon must also apply to the other and comparatively *rare* causes.

§ II. Laennec regarded bronchophony as an essential dependence on increased density of the pulmonary texture, and supposed that it was simply produced by the greater facility with which comparatively dense homogeneous tissue—homogeneous from the exclusion of air—conducted the laryngeal vibrations to the surface.

This explanation is inadequate to meet all the circumstances of the case. In the first place bronchophony *may* exist, and this to an intense degree, over lung rarefied to such a degree as to give actually almost tympanitic resonance under percussion. Of this fact, (not generally known, or, at least, taught,) I have observed a certain number of examples, where *post-mortem* examination left no doubt of the absence of any textural change in the lung except emphysema. In the second place, as was, I believe, first mentioned in print by Skoda, the voice resounds sometimes with greater intensity, when ausculted over the chest than over the larynx itself. In the third place the pitch of the bronchophonic differs sometimes distinctly from that of the laryngeal voice. These facts, without disproving the correctness of Laennec's theory as far as it goes, show at least that it requires an addition of some kind to make it include all the varieties of the phenomenon.

§ III. Skoda, holding the general doctrine that the "varying conducting power of the healthy and diseased lung-substance cannot be taken as a basis of explanation of any of the phenomena of auscultation," specially opposes Laennec's views of the mechanism of bronchophony on the following grounds:

(*a*) Bronchophony may in the course of a few minutes appear and disappear over hepatised lung, the other physical signs, especially the percussion sound, having undergone no change. (*b*) When vocal reso-

nance thus suddenly disappears, it may as suddenly be restored by making the patient cough or breathe deeply, so as to free the bronchi from fluid in the part of the organ ausculted. (*c*) In cases of pleuritic effusion, the resonance grows weaker and weaker in proportion as the fluid increases; now, as the lung grows more and more solid, the greater the quantity of pleural fluid compressing it, the reverse ought to be observed, were Laennec's doctrine of solidification and improved conducting capability well founded. (*d*) If a healthy and hepatised lung be removed from the body, and if, while one person speaks through a stethoscope placed in contact with the surface of each organ successively, a second listens through another stethoscope placed at an opposite point of that surface, the listener will find that more intense resonance reaches the ear through the healthy than the diseased lung.

What is the force of these objections? Let us examine them *seriatim*. (*a* and *b*) Since I first became acquainted with Skoda's statement concerning the appearance and disappearance of bronchophony in hepatisation, I have repeatedly endeavored to produce artificially the change he describes, but have invariably failed; I have questioned other physicians on the point, and find that they have not observed the alleged variableness in the vocal resonance. I have, however, in one or two instances, noticed intermittent bronchophony occurring spontaneously without the patient having expectorated or even coughed,—a peculiarity evidently of different mechanism from that insisted upon by Skoda, and one to which I will by-and-by return. (*c*) The argument derived from the phenomena of pleuritic effusion, seems feeble, and, indeed, unsound. The interposition of a mass of fluid between the condensed lung and the surface alters the terms of the problem completely. It has been shown by Colladon and Sturm, that sonorous rays which reach the surface of water at a very acute angle do not pass into the air, but undergo reflection in the interior of the liquid. Now the angle at which the sonorous vibrations reach the fluid from the bronchi, and ultimately reach the outer surface of the pleural fluid, may very possibly often prove of the degree of acuteness fitted to prevent their passage into the air. At all events Skoda, by ignoring the new influences likely to be exercised by the fluid, renders his argument valueless.* (*d*) The results I have obtained from some experiments on the conducting powers of hepatised tissue, do not agree with those announced by Skoda. First: It is, I admit, quite true, that tissue, called hepatised, may conduct the voice no better, or even less forcibly, than a similar thickness of healthy parenchyma; but it is equally true, that this is not a constant result. I have occasionally found hepatised lungs taken from the body, conduct the sound with extreme intensity. And these varying results may be obtained from different lungs, which the naked eye would judge to be in the *same* state physically, in regard of their shares of air, fluid, and semi-plastic substance: but it is evident, from

* Let it not be forgotten, too, that in the interscapular region strong bronchophony is sometimes audible, even where fluid is accumulated in large quantity in the pleural sac.

the variations in result, that, acoustically, they are in *different* physical states; and that, therefore, such experiments as Skoda's are not to be trusted to. Specimens of parenchyma, apparently identical, are in reality widely different. There can, for example, be little doubt, that varying homogeneousness plays a more important part, than any observable so-called solidification, in regulating the conducting power of the lung. In the varying homogeneousness of different specimens may, in truth, lie the key to the difficulty; but even, if so, it is a key which cannot practically be used. Secondly: If, while one person speaks into a stethoscope, with its narrow end introduced into the trachea, a second listens over a part of the chest where hepatised lung lies beneath, (and where intense sniffling bronchopony existed during life), the listener will often be surprised at the singular and total absence of sound. Skoda, obliged to admit this fact, attempts to evade its force by supposing the vibrations to be interfered with by fluid in the bronchi. To this, I would reply, that I have satisfied myself of the total absence of such *post-mortem* resonance over pneumonic solidification, in a case where the bronchi, to the third and fourth divisions, were peculiarly free from fluid, and scarcely any spumous liquid infiltrated the parenchyma—which very same parenchyma, removed from the body, conducted the voice from one stethoscope through another with striking intensity. If we consider the main difference in the physical conditions of the parts, when an individual himself speaks, or when another speaks into his trachea after his death, an obvious explanation of the experimental failures to imitate the bronchophony of life suggests itself. In the dead body, in truth, the laryngeal, tracheal, and bronchial walls take no part in the production or conduction of the sound, which is propagated by their contained air alone; whereas, in life, the walls of those tubes obviously conduct the sonorous vibrations. But to admit this, would have been fatal to more than one of Skoda's hypotheses. Besides, hepatised and healthy lungs are not strictly comparable in and out of the body in regard of this matter; *within the body* the contact of a hepatised lung with the chest-wall is more perfect than that of a healthy one; and, admitting that the former is a worse conductor in regard of the condition of its substance, it may be a much better one through the closeness of its union (especially if adhesive) with the parietes. Here is a point which has been totally overlooked by the Viennese physician and his followers.

§ IV. I conceive, then, that, whether Laenneo's doctrine be true or false, the arguments just reviewed fail to prove it unsound. Skoda himself naturally thinks otherwise; and, excluding the walls of the trachea and bronchi from all share in the *conduction* of the sonorous vibrations of the chordæ vocales,* (an office assigned by him to the contained air of those tubes alone,) maintains that bronchophony is really pro-

* Skoda, of course, admits, that the bronchial walls, in the spot where consonance takes place, intensify the consonating tones of the air within them by their own vibration; but this is a very different thing from their taking part in the production of bronchophony by conducting the laryngeal voice.

duced by the consonance of the air in the bronchial tubes with the laryngeal voice.

The hypothesis of consonance does not appear to me satisfactory; and it unquestionably fails to meet all the conditions of the problem. The reasons on which I ground this opinion are as follows:—(*a*) Air in any enclosed space does not consonate with every sound produced at its orifice, but only with the fundamental note of that space, and with certain others having a fixed harmonical relationship to that fundamental note,—with certain of its *concords*, in short. This is easily ascertained, in a rough way, by running the gamut with the voice at the mouth of an empty water-bottle; one note only of the octave is at all markedly reinforced by consonance within the cavity,—one or two others, (according to the distance from the orifice at which the vocal sound is emitted, and the depth of the mass of air within the bottle,) very slightly increased in loudness. Now, on the contrary, when bronchophony exists, it is audible with *successive notes* of the octave, standing in no harmonical relationship to each other—absolute *discords*, in short. These successive notes are to be found at the lowest part of each register, (whether bass, tenor, or soprano); but the force of bronchophony gradually decreases, not at harmonic intervals, but on *each successive note from below upwards*, until the resonance disappears altogether;* and obviously the limitation of bronchophony to grave tones, as contra-distinguished to acute ones, has nothing to do with the principle of consonance, but depends upon the difference in the number of vibrations and breadth of the sonorous wave, when notes of these two classes are severally generated. (*b*) Bodies consonate only in unison, or in certain fixed harmony, with the original sound which throws them into vibration.† Now, the pitch of the bronchophonic voice varies irregularly from that of the laryngeal with which it co-exists. This difference of pitch is especially to be caught in cases of hepatisation, and is sometimes very striking in amount; the corresponding notes heard in the larynx and on the surfaces of the chest are then, very perceptibly, discords. (*c*) Skoda's exclusion of the tracheal and bronchial walls from all participation in the transmission of the laryngeal voice is at variance both with theory and experiment, and cannot for a moment be acceded to. (*d*) In cases where the bronchophonic voice is very positively and notably louder than the laryngeal, it is difficult to believe, from the mere fact of the intensity of the sound, that the phenomenon can be due to consonance. For a consonating sound, as a rule, is vastly more feeble than the primitive tone eliciting it; and the nicest adjustment of the quantity of air in the consonating body (presuming this to be hollow) is required, in order to produce any serious increase in the amount of intensity. Let it, however, be granted, *argumenti gratia*, that chance

*Curiously enough, the vocal *resonance* always ceases to be perceptible at a lower point of the scale, than the vocal *fremitus:* this is another difference to add to numerous others distinguishing the properties of the two phenomena.

†The unison-note alone is distinct to ordinary ears; the consonating harmonies are so faint, as to require the organ of a Costa for their detection.

may sometimes cause the column of air between the larynx and the seat of bronchophony to be of the appropriate length to produce a marked increase of sound—the doctrine of Skoda gains nothing by the concession. For, be it remembered, Skoda rejects conduction as an element of bronchophony—bronchophonic voice is, in his apprehension, consonating voice; consonating voice is, then, under the above circumstances, by admission, louder than the original voice. Now, here is an idea irreconcilable with observation; for, it does not appear, that (provided the original and consonating sounds be produced by bodies of the same class, as vibrating strings, hollow bodies, solid plates, etc.) the consonating sound is ever louder than the original tone.* (*e*) If the excess of loudness of the bronchophonic over the laryngeal voice were from consonance, *vocal fremitus* (inasmuch as the walls of the consonating tubes must vibrate in the direct ratio of the vibration of their contained air) ought to rise and fall exactly as *vocal resonance*. Now, in point of fact, these two phenomena do not invariably maintain any direct relationship to each other; one may gain, while the other loses, in intensity.

These objections appear to me conclusive against the pure doctrine of consonance, as taught by Skoda, while they show that, if consonance plays any part in the production of bronchophony, it must be a subsidiary, rare, and accidental one. And even this concession is rather made on the ground, that the occurrence of consonance within the chest is not, *a priori*, impossible, than in deference to the arguments actually adduced in its favor.

§ V. From the discussion into which I have now entered, it would follow that the mechanism of bronchophony is probably complex, and certainly not, as the attempt is commonly made to prove it, invariably one and the same.

There are four points which appear especially worthy of consideration: the conduction of laryngeal voice; its possible increase of intensity within the chest; the distance at which that increase of intensity (if real) occurs from the part of the thoracic surface examined; and the relationship of pitch of the laryngeal and bronchophonic voices.

1st. In regard of conduction of laryngeal sound, theory would support the inference, that as the human voice is best propagated in air, the more the lungs were rarified, the higher would their conducting power become; and, in accordance with this, it is certain that intense bronchophony is sometimes heard over highly emphysematous tissue. However, on the other hand, as the tracheal and bronchial walls themselves vibrate

* The case may be very different where vibrations are communicated from a body of one physical constitution to a consonating body of another class. Thus, where a tube takes up the vibrations of a solid disc, the consonating note of the tube may (by managing carefully the length of the vibrating column of air in the interior) be made incomparably more powerful than the original tone; the quality of such notes is exquisitely pure and full; and, long ago, Savart suggested the construction of a musical instrument on this principle, which, it seemed probable, would exceed in melody and power any of those in use. Civilised musicians have not profited by the philosopher's suggestion; yet the savages of some of the Pacific islands, curiously enough, have hit upon rude contrivances illustrating the principle.

during speaking, any really solid material directly connecting a large bronchus with the surface of the chest, must conduct those vibrations forcibly; and, in accordance with this, we find that wherever solid fibrous structure is seated in the manner supposed, bronchophony of the most intense character is audible. But if the union of the solid material with the chest-wall be imperfect, if there be any interruption at the planes of union of the conducting materials, the acoustic conditions are completely changed, inasmuch as interruption at the union of media of different densities most deeply impairs the conducting faculty of the series. Here is one clue to the differences in vocal resonance, observed in cases where the physical conditions appear, on superficial view, identical; hence, too, we have no fair reason to expect that, in all samples of the variable semi-solid states comprised under the title of "hepatisation," conducting power should be affected in an uniform manner, and experiment shows that it actually is not. Experiment, in truth, alone can teach, in each instance, what the force of conduction really is in the various complicated conditions of physical change in the lungs.

2ndly. It is indubitable, that the bronchophonic voice is sometimes louder than that transmitted through the stethoscope directly from the larynx. The extreme rarity of this occurrence does not affect its reality; and hence, some explanation must be found for the increase of intensity within the thorax. We have seen the objections to Skoda's hypothesis of consonance. Now, there is another way in which the intensity of sounds may be augmented at a greater or less distance from their place of production—by reflection, and by reflections brought to a focus, or *echo*. But are the conditions of reflection fulfilled in the hepatised lung? It would appear so; for the tubes along which the voice is transmitted from the larynx are surrounded by semi-solid material, proper (when compared with healthy tissue) to reflect and concentrate the sound; while the air-cells and minute bronchi are closed to a variable distance, and prevent its divergence. The tubes resemble so many speaking-trumpets, and, just as in these instruments, the augmentation of sound is produced by reflection from their quivering walls; as this reflection tends to propagate vibrations (otherwise divergent) in the same direction, increased intensity of sound must be the result. And, further, if the reflected vibrations chance to be brought to a focus within a large tube, then *echo* will occur; and, as under ordinary circumstances, the echo may be materially louder than the original sound. But, it may be inquired, how, upon this theory, is the temporary disappearance of bronchophony, already referred to as a possible, though very rare occurrence, explicable? It is conceivable, that where such suspension occurs, this may sometimes depend on the deadening influence of accumulated fluid in the tubes.* It may also be sometimes traced to accidental pressure of a main tube by some extraneous body, which, from movements of the trunk, the act of coughing, &c., presses much or little, or not at all,

*The effect of carpeting or woollen cloth of any kind, in deadening the sound of music in an apartment is well known. The intermixture of air and solid fibres in the carpets, through which the sound has to pass, deadens the echo

upon that tube.* It seems extremely probable that, under the latter circumstances, bronchophony would, (I have not, however, verified this conjecture,) be heard at some point of the chest nearer the bifurcation of the trachea. Again, it is possible that certain changes of posture, altering the relationship of the reflecting surfaces, might interfere with the production of echo, by preventing the reflected sounds from coming to their usual focus. Besides, the position of the auscultator in respect of the focal point, might prevent him from hearing an echo really existing.† The force of the echo will also rise, the smoother the bronchial walls, and the larger the tubes in which it occurs. And numerous other circumstances may be conceived, but scarcely proved, to affect the phenomenon. Among these, the composition of the gases within the bronchi may, for aught that is known, hold an important place; hydrogen has been proved to deaden sound greatly; the effect of carbonic acid, mixed with other gases and aqueous vapor can only be ascertained from experiment.

Thirdly. As concerns the distance from the point of auscultation at which the reinforcement of sound within the thorax occurs: the further away, the less of the resonance will reach the surface; the amount, however, will be modified by the conducting property of the interposed media.

A little consideration will show that these three conditions of bronchophony—conduction of laryngeal sound, increased intensity of this within the thorax, and proximity of site of the increase—may or may not be directly as each other; one may be in a state favorable to, the rest unfavorable to, the formation of bronchophony. Hence the variable state of the sign in different cases of the same disease; and hence an additional clue, for example, to the inconstancy of bronchophony in pleuritic effusion.

Fourthly. The relationship of pitch of the bronchophonic and laryngeal voices seems the most difficult part of the subject—difficult, at least, in those cases where a distinct difference can be detected, in the pitch of the two. The consideration of this point is reserved for another occasion.—*London Med. Times.*

between the ceiling and floor, by which the original sound is swelled."—Herschel, art, "Sound," *Encyc. Metrop.* Aerated mucus and sanguineous serum in the bronchi would have the same effect on vocal echo in those tubes, as the carpeting under the circumstances referred to above.

* This cause is suggested from actual observation.

† The existing theory of echoes generally is inadequate to explain many of their phenomena. There is (or was) a ruined fortress near Louvain well illustrating this. Here, if a person sings, he only hears his own voice, without any repetition; those who stand at some distance hear the echo, but not the voice,—and they hear the echo with surprising variations,—sometimes louder, sometimes softer,—now near, now distant.—*Burrowes's Cyclop., Art. "Acoustics."*

*London Hospital.—Abscess of the Lung following Pneumonia; Death; Autopsy.* (Under the care of Dr. PEREIRA.)—The formation of abscess in the lung as a consequence of pneumonia is considered a very rare occurrence; but it is probably still more rare to find a circumscribed accumulation of pus in the pulmonary tissue taking on a semi-gangrenous character. Such events seem in some degree to exclude each other; for the vigorous exudation indispensable for hemming in purulent matter can hardly be contemporaneous with sphacelus of the lung. However this may be, it is plain that in constitutions brought to a state of great debility by excesses, the most unusual pathological phenomena will spring up; and these being at all times instructive, we shall just, from the notes of Mr. Whitby, relate the following case:

John A. T——, aged forty, formerly a solicitor, married, and the father of four children, was admitted, January 18, 1852, under the care of Dr. Pereira. The patient is of a dark and sallow complexion, thin, weak, and exhibiting all the signs of a deteriorated constitution; his habits have been very intemperate, the chief beverage he indulged in being spirits. His health had, however, been tolerably good, until about five months before admission, when he was seized with pain in the right side of the chest, increased by a full inspiration; his habitual cough became very troublesome, the expectoration profuse, and of an offensive odor, pretty similar to that which was noticed on his admission. No medical aid was sought until three weeks since, when rigors had set in; which the patient tried to conquer by large potations of gin-and-water. The pain in the right side of the chest was then somewhat relieved by blisters, &c., but he was soon obliged to apply for admission into the hospital.

When first seen, the patient complained of cough and abundant expectoration; his voice was hoarse, the breath very short, the countenance anxious and sallow, the bowels relaxed, but the appetite still good. The tongue was furred and moist, with an unpleasant taste in the mouth; the pulse rapid and small, and the urine abundant, but very ammoniacal.

On examination of the chest, dulness was found over the right subclavicular and mammary regions, the corresponding parts on the left side being resonant: respiratory murmur, indistinct over a great portion of the right side of the chest, both anteriorly and posteriorly, whilst it was puerile on the left. To the right of the central part of the sternum a peculiar tremulous sound is heard, which has much resemblance with the pulsation of a large vessel through a cavity containing fluid. This sound was not, however, constantly noticed, nor could it be excited by any particular position of the body. The patient was aware of this peculiar bruit; he could himself hear it, and compared it to the noise made by water bubbling from the lid of a tea-kettle. The action of the heart was accelerated, but no other irregularity was detected. As to the voice sounds, pectoriloquy was heard at the base of the right scapula. When inquiring about the patient's sensations, it was found that the right side of the chest was painful, and that the cough was

extremely troublesome when he lay on his left side, the easiest posture being the slightly raised dorsal decubitus.

Dr. Pereira ordered bark and ammonia to be taken three times a-day. The symptoms continued pretty well unaltered for the next few days, during which the patient took, first chlorate of potash, and subsequently small doses of sulphate of quinine and morphia. The sputa remained of the same nature, the perspirations at night became very profuse, and the relaxation of the bowels could hardly be restrained by logwood and chalk. Thus the patient progressed for about three weeks, the amphoric murmur on respiration being audible over the right side of the chest, and the heart's action being accompanied by a peculiar gurgling and undulatory sound.

From the physical signs, and the nature of the symptoms which had existed previous to the patient's admission, it was assumed that he had suffered from pleuro-pneumonia, which had resulted in abscess of the lung, with adhesion of its walls to the parietes of the chest, besides effusion into the cavity of the pleura. Thus was a tremulous sound produced with each impulse of the heart, resembling the vibration produced by tapping a phial containing air and fluid. Twenty-six days after admission, the patient died suddenly, after expectorating a large quantity of very offensive matter.

*Post-mortem Examination.*—On viewing the chest, before proceeding to the inspection of the thoracic viscera, it was observed that the right side was larger than the left, and presented a rounded appearance, with the filling up of the intercostal spaces. The thorax, when opened, was found completely filled with pus of a very offensive odor. A large abscess was situated in the right lung, the outer wall of the cavity being adherent to the pleura costalis; and running in front of the lung in a transverse direction, was a broad sinus of communication, extending to the middle mediastinum, which region might be considered as the internal boundary of the abscess. The substance of the lung contained a large quantity of mucus, mixed with air and pus, as well as small tubercles and pieces of lymph. The bronchial tubes were filled with matter similar to that contained in the abscess, and the lung was adherent, over its whole surface, to the parietes of the chest. The left organ was perfectly healthy, but the cavity of the pleura contained about five ounces of serum. The heart was pale and of lax fibre, but otherwise in a normal condition.

It is clear that certain changes in the walls of the above described abscess, or a decomposition of its secretion, must have given rise to the fœtor so characteristic of gangrene. The latter did not, however, exist in the manner usually seen, namely, a crumbling down of the pulmonary tissue, and a dark livid color of parts. A circumstance which is finally worthy of record is, that the fœtor had existed from the commencement of the purulent secretion.—*London Lancet.*

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*A Case of Hydrophobia in the South of France.*—M. Guyon, of Valence, in the South of France, has communicated to the Société d'Emulation of Paris, the report of a case of hydrophobia, drawn up

in a very graphic manner, and presenting some points of interest. The patient was a nailer, about thirty years of age, who was bitten by a little dog, which he had never seen before, and which was quarrelling with his own. No signs of disease were noticed in the strange dog; it was seen for several hours afterwards to play about, gnaw bones, &c., and was subsequently lost sight of.

The medical man who was called in wished to cauterize the three small wounds with the hot iron, but the patient refused, and his surgeon readily yielded, as the dog was supposed to be healthy. Forty days (the period vulgarly believed necessary for incubation) passed away, and the patient now exclaimed that he had been more afraid than hurt, for he had felt uneasy in his mind ever since the accident. About a fortnight after this, the man began to give signs of peevishness, and became quarrelsome and abusive. He soon complained of pain in the vicinity of the pharynx, difficulty of swallowing came on, and the fits of dyspnœa, when water was placed in his mouth, were dreadful.

The surgeon in attendance noticed that the papillæ at the base of the tongue were much enlarged, that the epiglottis became quite erect, and resembled in shape and color a small cherry. Every time that he succeeded in lowering it, the respiration became easier. There was no horror of water, but a difficulty of swallowing it, the fauces, larynx and pharynx being highly injected. The spasmodic fits succeeded each other with fearful rapidity, the cellular tissue of the neck and chest became emphysematous, and the patient died asphyxiated the day after the attack.

No post-mortem examination was allowed, but the larynx and posterior portion of the tongue were taken out; they did not present any distinct alterations. M. Guyon appends to the case the following remarks:

1st. It is clear, judging from the case just related, that a dog can communicate the disease whilst the latter is yet latent; and if it be the salivary secretion which conveys the virus, it does not seem necessary that the animal have a great abundance of it, and foam at the mouth, for the fluid to be contagious as is vulgarly supposed. 2nd. It has been imagined that fear and apprehension have much influence on the development of hydrophobia; but this case shows that the disease may manifest itself more than a fortnight *after* every sort of apprehension has passed away. 3rd. The peculiar rising and stiffening of the epiglottis noticed in this case, has not been observed before, and would sufficiently explain the laryngeal spasms, which eventually brought on asphyxia. The phenomena of hydrophobia might thus be accounted for, without having recourse to a lesion of the nervous centres, which lesion has, in fact, never been demonstrated by autopsy. 4th. The emphysema of the neck and chest was probably due to the rupture of some pulmonary vesicles during the violent spasms which the patient had experienced. This circumstance shows very clearly that there must be direct communications between the general subcutaneous cellular tissue and the submucous areolar texture of the lungs. 5th. The hypertrophied papillæ at the base of the tongue, which were seen very early in the course of

the disease, would explain the sense of pharyngeal constriction of which the patient complained at the very outset. Thus it would finally appear, that it is principally in the pharynx and larynx that hydrophobia becomes localised, although it is likely that the disease arises from a virulent infection of the whole organism.—*Ibid.*

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*Remarks on the Microscopic Characters of the Urine in Bright's Disease of the Kidney.* By JOHN D. MACDONALD, ESQ., R. N.

Having studied, from time to time, the microscopic characters of the urine in Bright's disease of the kidney, and compared the appearances there presented with those of a section, or torn-up portion of the diseased gland itself, when the occasion offered, several objects of interest were frequently to be observed, either little known or not at all described; and, as they illustrate and support the pathological views of the malady in question, so ably put forward by Dr. George Johnson, they may be worthy of notice.

The presence of lymph, or pus, is supposed to afford the only unequivocal evidence of inflammatory action, and this seems to be borne out in renal disease. Mechanical obstruction and passive congestion are the first effects of excessive distension of the uriniferous tubules, by whatever cause induced, and in the great majority of cases the antecedents of any active state which the vessels may take on. The condition of the kidney in these respects will be clearly indicated by the presence or absence of fibrinous casts of the tubules in the urine; but this part of the subject must be dismissed, as the remarks about to be offered chiefly refer to certain changes which are incident to the secreting cells of the kidney.

Admitting the faithfulness of the exposition given by Mr. Bowman, of the minute anatomy of the kidney, as demonstrated at any moment, a vindication of it may be called for, the pathology of the granular kidney seems to be simply this—an error of secretion, depending most probably upon the faulty character of the plasma from which it is derived, is attended with a gradually increasing deposition of oily matter within the cells, which are the principal agents in the process. The circumstance gives rise to an over-distension of the tubules, (more especially between the meshes of the matrix, where there is least resistance,) and thus, by mechanical pressure, the return of blood through the venous plexus which surrounds them is obstructed, the Malpighian tufts become congested, and may be ultimately ruptured; so that the presence of albumen in one instance, and actual blood in the other, may be detected in the urine. In some cases, the hæmorrhage which occurs in this way is truly alarming, and the more immediate cause of a fatal issue. Notwithstanding the close analogies existing between the liver and kidney, with respect to structure, function, and the diseases to which they are subject, there is this much to be said, that the kidney does not admit of congestion with impunity, while the liver may be gorged to a considerable extent, and yet suffer comparatively little disorder of function. There may be often some difficulty in determining the fatty nature of

the contents of the epithelial cells of the kidney, when discharged with the urine, more especially if little is understood about the changes which they are liable to undergo, in obedience to common laws. The most usual metamorphoses of these cells exhibit eight phases. In the first, distinct oil globules are to be seen within them, varying in number and size, and giving a more or less rounded figure to the cells themselves, which become enlarged in a proportionate degree. 2dly. The oil globules may run together, and so completely fill the cells, that (with the exception of the nuclei, which are generally visible,) they appear like starch granules, or little masses of oil, refracting the light powerfully. 3dly. The fat gradually assumes a more concrete form, loses much of its brilliancy, and presents a mealy surface, any remaining globules becoming angular and irregular in form. 4thly. This concrete mass accumulates around the nucleus, and a clear space begins to appear between it and the cell-wall on the opposite side, which may be partly due to the imbibition of water. 5thly. An analytical change takes place in the fatty matter, which separates into its two constituents, the more fluid part exuding through the cell wall, while the more solid presents a crescentic appearance, the nucleus occupying its centre. 6thly. The cell itself breaks down at its weakest part, and the crescentic mass exhibits a well defined convex border, formed by the remaining portion of the cell, and an uneven concavity where the cell is defective, and the concrete fat is exposed. 7thly. The little crescent continues to extend itself, the outline becomes better defined, and a fusiform figure is ultimately assumed, the nucleus still occupying the centre of the mass, having undergone no apparent change; and 8thly. The pointed extremities of this little fusiform body are drawn out into filamentous processes, so that when several of these altered epithelial particles unite end to end, as often happens, one is reminded of the mode of development of the white fibrous tissue; and on the whole they present such a close resemblance to cancer cells, that the history of their formation is of some importance, to be borne in mind with reference to diagnosis, especially if blood globules be also present with them; for it has been asserted, that if fusiform cells and blood discs are found to co-exist in the urine, certain indication is afforded of cancerous disease, affecting either the kidney or the bladder.

Now, many persons, keeping this doctrine in view, may arrive at once at a conclusion, without waiting to draw the distinction between an actual cell and a cell-like body. Forms very similar to those above described, abound in the spleen, with blood discs seemingly as nuclei, and differing altogether from the muscular fibre cells (so called) of the tubercular sheaths.—*Lond. Med. Times and Gazette.*

# SURGERY.

## CHARING-CROSS HOSPITAL.

*Convulsive Movements of Stump; Removal of the Nervous Bulbs; Amputation at the Shoulder-joint; Persistence of the Spasmodic Jerking.* Under the care of Mr. HANCOCK.

When the considerable number of amputations which are performed in public and private practice is considered, it might in some degree appear surprising that so few cases of painful stump come before the profession. What, in fact, becomes of the divided extremities of the nerves, in the great majority of amputations? They must certainly experience some compression, by the formation of the cicatrix, and yet the greater number of stumps are painless, and very useful; whilst it is to that very compression and irritation that the rare cases of pain and convulsive movements are attributed. The more or less bulbous state of the extremity of the divided nerves has no doubt some influence on the development of unpleasat symptoms; but it must be recollected that nerves are almost always found bulbous in perfectly healthy stumps. Must we seek the explanation of the abnormal state of parts alluded to, in the patient's temperament; or in the peculiar manner in which the bulbs may be incorporated with the bone and muscles; or in the size of the bulbous extremities? It is perhaps to a combination of these three causes that the distressing symptoms which have been recorded may be ascribed; but it may be presumed that the first of these causes—viz: the patient's peculiarity of temperament—has the greatest influence on the phenomena, especially where, besides pain, convulsive movements of the stump are manifested.

Of the few patients who have suffered in the manner last mentioned, the larger number were women, and these almost always of a more or less hysterical temperament. But it is nevertheless true, that cases have been recorded, in which the pain in the stumps, and the spasms, excited hysterical attacks which had never been developed before.

This affection is so distressing, and so little under the control of remedies, that surgeons have been at great pains to ascertain the exact nature of the neuromata or nerve-bulbs which sometimes follow amputation, in the hope that that knowledge might lead the way to a method of avoiding their formation. It has been found that the bulbs are not composed of nervous filaments, but that the bulk is made up of exudation matter, distributed among the fibrillæ of the nerves; and there are few stumps which do not contain some of these bulbs. But it is probable, that when they increase beyond a certain size, and are compressed by a hard cicatrix, they excite the pain and convulsive movements which are sometimes noticed. If this be true, a second amputation offers a good chance of freeing the patient from these symptoms; but herein we do not always succeed, as will be seen by the case lately under Mr. Hancock's care.

Nor are there examples wanting to show that there may be, in certain

subjects, such a confirmed propensity to this kind of neuritis, that the affection will spring up again and again, though the bulbous extremities may be removed, or even the whole stump taken off at the joint. In fact, pain and convulsive movements may occur without the formation of bulbs, the symptoms probably depending on the more or less nervous inflammation which attends the process of cicatrization. On this head Mr. Miller says, very justly: "In the case of neuralgia apparently dependent on neuromata, these may be taken away by incision, and the wound treated most carefully, yet the same painful feelings are very prone to return, before fresh neuromata have had time to form; and may continue, even when careful manipulation satisfies the surgeon that additional neuromata have actually not been produced." This will be very strikingly illustrated by the following case, which for several months excited a lively interest at the hospital. From notes taken by Mr. Dalton, the house-surgeon, we become acquainted with the following facts:—

Ann V——, aged twenty-nine, of fair complexion, blue and somewhat wild-looking eyes, was admitted April 10, 1851, under the care of Mr Hancock. She is evidently of a highly nervous and excitable temperament; has generally attended to household duties, without any fixed occupation, and seems to be affected with the peculiar hysterical tendency of exciting as much as possible the attention and sympathy of those with whom she comes in contact. The left arm has been amputated, at about the middle point between the head of the humerus and the condyles, and the stump is constantly and convulsively moving, principally in a direction from above downwards. The pectoral muscles, the trapezius, the scaleni, and the platysma myoides, are also strongly agitated, and the parts are never at rest except when the patient is asleep.

She states that she was seized, about sixteen years ago, with severe pain and inflammation of the elbow-joint, (without having met with any injury,) and soon after, a rather serious illness, probably continued or other fever. For these symptoms she was actively treated; but becoming worse, she repaired to town, and placed herself under the care of the late Mr. Morgan, at Guy's Hospital. Here the usual means employed for diseases of joints were carefully used, but to no purpose; and Mr. Morgan was at last obliged to take off the arm—a period of five years having elapsed between the first onset of the articular disease and this amputation. The patient returned to the country before the stump was completely cicatrized; the healing process was completed in about two months, and a firm cicatrix formed.

At the expiration of three months after the operation, and one after the entire closure of the wound, the stump began to move convulsively, most of the muscles of the shoulder and neck connected with the arm soon partaking of the spasmodic twitchings. This had been preceded for several days by very intense pain in the extremity of the stump. Soon afterwards, a collection of matter occurred in the part, as she was then several times seen by the late Mr. Aston Key, at St. Alban's, who recommended her to return to Guy's Hospital. She now stayed in that

institution for several months, during which, blisters, setons, issues, ointments of various kinds, and general treatment, were tried with great perseverance, but without any relief to the convulsive action or to the pain. Among the means employed, was the tying down of the stump; but when the latter was well secured, and the movements completely prevented, the *whole body* used to be thrown into convulsions. The pain would sometimes radiate from the stump to the neck, back of the head, and down the spine, and convulsions occasionally were noticed in the left thigh, leg, and great toe. Even the right shoulder shook now and then violently, and became exquisitely painful. She often woke suddenly, and found both the left leg and the stump in violent convulsions, but the movements used mostly to cease during sleep. The patient, however, stated that she had often been told that the stump, even when she was sound asleep, would start occasionally. It was likewise noticed that, at the height of the convulsive action, the skin and cellular tissue of the cicatrix became violently retracted.

Some time after leaving Guy's, the patient was admitted into St. George's Hospital, where the series of remedies available and sometimes efficacious in such cases, were successively tried, but as none gave any relief, amputation of the shoulder joint was mentioned, and agreed upon, two years having elapsed since the removal of the arm. But at this time a new feature arose in the patient's case; severe epileptic fits set in, which occurred more or less frequently for the space of two years after she had left St. George's.

We now find that the girl fell into the hands of a mesmerist, and she states that the convulsive action generally stopped during the artificial sleep. But it is difficult to put any faith in the circumstances connected with this period of the patient's history, as everything coming from such quarters must be received with extreme caution. There can be no doubt, however, that the girl must have been made much worse by the mesmeric juggleries, and that her present nervous, hysterical, and excitable condition is principally owing to the constant irritation offered to her nervous system, during seven years mesmeric treatment. After this, the patient suffered so much pain and inconvenience, that she applied for admission at St. Bartholomew's Hospital, where she stayed about nine months. The best directed means were here again perfectly useless; the amputation at the shoulder-joint was proposed, but she seems to have been at that time unwilling to submit to this last resource. At St. Thomas's Hospital, whither the patient next repaired, Mr. Green and Mr. Travers were of opinion that there was no chance of any relief but by removal at the joint. Some incisions were here made into the stump, but she left without consenting to the operation proposed.

Frequent blisters were subsequently applied to the part, as well as to the spine; galvanism was tried, but all to no purpose. The violence of the fits would sometimes abate considerably, and then she improved in health. She has always exhibited signs of indolence, and within the twelvemonth which preceded her admission into Charing-cross Hospital she gained much flesh.

The patient has amused herself in casting up the number of some of

the remedies which were used in the different institutions where she was admitted, and finds that the stump was lanced twenty-five times, that she had four hundred and ninety-five leeches, ninety-six blisters, &c. It should be particularly noticed that during all these years, the catamenia (which had begun at eleven) were always very regular.

Mr. Hancock endeavored at first to give tone to the system, and to overcome the hysterical and nervous state of the patient. For this purpose, the most approved means, as quinine, steel, zinc, morphia, &c. &c. were used for a considerable period, but without any very tangible effect. It was clear, after several months had elapsed, that a more direct interference would be required to subdue the convulsive action of the stump. There could be hardly any doubt but that the bulbs of the nerves were much enlarged, and that their great size would ever be in the way of a cure; Mr. Hancock therefore resolved, before having recourse to the complete removal of the stump, to dissect out the bulbous extremities of the nerves.

On the 22d of August, 1851, whilst the patient was under the influence of chloroform, Mr. Hancock made a longitudinal incision, from the shoulder downwards along the anterior aspect of the stump. When the parts were fairly laid open, a bulbous mass, about the size of the last phalanx of the thumb, came into view. This was carefully freed from the surrounding parts, down to the bone, and removed. During the operation the brachial artery was divided, and immediately tied; the lips of the wound were brought together, and when the stump was placed upon the pillow, it was observed that the spasmodic movements had entirely ceased. This circumstance was extremely satisfactory, and confirmed the belief that the presence of the nervous bulbs had been mainly instrumental in the persistence of the symptoms through so many years.

This favorable state of things lasted about one month; the stump lay perfectly still, and hopes were entertained that this very obstinate affection was at last conquered; but the patient, having been seized by a fit of impatience, about four weeks after the last mentioned operation, the stump began again to be convulsed, and matters soon became as bad as ever. It was now evident that nothing short of amputation at the shoulder-joint would be of any avail. Mr. Hancock, therefore, proposed the operation to the girl, who readily consented. On the 12th of November, 1851, the patient having been narcotized with chloroform, Mr. Hancock performed amputation at the joint, making a good flap of the deltoid muscle. It was noticed that the stump, when severed from the body and placed on the table, continued to be convulsively agitated for several minutes. No pathological appearance of importance was revealed by the examination of the stump, except that the nervous trunks were closely adherent to the bone.

The chloroform affected the patient to a very great degree, for about twenty-four hours after the operation, the hysterical diathesis having a large share in the somewhat alarming symptoms which were observed. This doubtful state did not, however, last long; the patient progressed very favorably for several weeks, and it might now be fairly surmised that all the pain and inconvenience which had been undergone for so

many years, were arrested; but hardly had the cicatrix formed, about two months after the operation, when the muscular fibres forming the deltoid, those of the trapezius, the scaleni, a portion of the great pectoral, and even the platysma myoides, were again thrown into strong convulsive action. The movements were just as continuous and spasmodic as they had been in the stump. When the girl was not observed, the jerking was much less rapid than when she was either angry or excited. Some suspicion had previously existed, and was now made somewhat strong, that the movements were, perhaps, not completely involuntary, Mr. Hancock thought it now prudent to allow the girl to breathe the country air; she was therefore discharged, February 15th, 1852, about ten months after her admission.

This is certainly one of the worst cases of the kind which have as yet been put upon record, with the only exception that Mr. Hancock's patient had no aneurismal pulsations accompanying the convulsive action. This case fully confirms the very generally received opinion, that neuralgia and convulsive movement of stumps, depending on a bulbous state of the extremity of the divided nerves, are hardly amenable to treatment, and that even the very severest measures, such as a complete removal of the stump, are found inefficacious. That the hysterical diathesis so unmistakable in Mr. Hancock's patient, must have had a very large share in the production of the symptoms, cannot for a moment be doubted; but it is clear, on the other hand, that the extremities of the nerves were more bulbous than is the case in the generality of stumps, and that there was a material and tangible cause for the symptoms besides the highly nervous and hysterical temperament. Had the patient never been affected with the disease of the elbow joint, which led to the first amputation, it is very likely that the hysterical diathesis, which exercised its full force on the stump, would have manifested itself in one of the numerous ways belonging to hysteria.

We need not refer our readers to the paper of Mr. Langstaff, in the sixteenth volume of the *Medico-Chirurgical Transactions*, to show that the soundness of a stump depends very much on the manner in which the soft parts cicatrize, and that very severe symptoms are apt to ensue when the bulbs of the nerves, which form almost in every stump, are increased to such an extent as to assume a neuromatous character. As to the actual nature of the enlargement, a subject to which we alluded above, Mr. Langstaff says:—"I think it right to mention, that on cutting through these bulbous extremities of the nerves, there are no signs of enlargement of their natural structure, the thickening appearing to have been occasioned wholly by the deposition of lymph, the effect of inflammation in the cellular tissue covering the neurilemma."

Mr. Langstaff mentions, in the same paper, the case of a girl, twenty years of age, whose forearm had been taken off, and who, like Mr. Hancock's patient, suffered from pain and convulsive action in the stump, with the addition of aneurismal pulsation. Every kind of means was tried, at several hospitals, without any favorable results; at last Mr. Langstaff took off the arm above the elbow-joint; and, in describing the

operation, he says:—"I drew out each nerve, to the extent of half an inch, from the surface of the stump, with a tenaculum, and cut through them to prevent their interrupting the progress of cicatrization, which I have done in other instances with success; and I was astonished that the division did not occasion greater pain than was complained of by the patient." "This patient was relieved of all the painful sensations she had so long been distressed with; she had no recurrence of hysteria, (which affection had been induced by the convulsions of the arm,) her health improved; a good stump was effected; and she is now (1830) able to obtain her livelihood." We have some reason to suspect that this same patient had, some time after the publication of the paper, a relapse; she then came under the care of Mr. Tyrrel, who performed amputation a little higher up, without effecting a cure. Mr. Bransby Cooper lastly removed the stump at the joint, and at this moment the soft parts about the shoulder are as convulsively agitated with this woman, as is the case with Mr. Hancock's patient.—*London Lancet.*

## OBSTETRICS.

PARTUTRITION AMONG THE ESQUIMAUX.—At a recent meeting of the Obstetrical Society, Dr. James Struthers exhibited the pelvis of a female Esquimaux, which was chiefly remarkable for the unusually large dimensions of the brim, cavity, and outlet, allowing the largest fœtal head to pass with great ease in almost any direction. The following are the diameters of the brim:—Transverse, 6 inches; conjugate, 4⅝ inches; oblique, 5¾ inches. Of the cavity:—Transverse, 5¼ inches; conjugate, 5⅝ inches: oblique, 5½ inches. The transverse diameter of the outlet was 5⅛ inches; and the public arch was unusually wide.

Dr. Struthers received the pelvis from Mr. G. C. Pirie, who found it last summer under a cairn of stones, (the common mode of burying among the Esquimaux,) near Cape Hooper, in Davies' Straits. It is an interesting fact, (of which Mr. Pirie satisfied himself, thereby confirming the statements of various writers on Greenland,) that the Esquimaux women have much safer and more rapid labors than the women of this country. There the whole process of parturition is left in the most absolute manner to nature. As soon as the woman begins to complain, she retires to a low skin hut, built for the purpose, into which no one is allowed on any account to accompany her. Before the lapse of an hour, she generally makes her appearance with the baby on her back. Not unfrequently labor comes on unexpectedly. Such a case came under Mr. Pirie's own observation. The woman left the ship, retired behind a block of ice, and came back within half an hour with the child in her hood. It is stated that the cord is not divided until the placenta has come away, and that the division is effected by the teeth of the mother. Miscarriages, twins, and monsters are of rare occurrence, and it is a very uncommon thing for a woman to die in childbed.—*Medical Times and Gazette, May 8th,* 1852.

*On the meaning of the term "Ulceration," as at present applied to uterine diseases.* By T. Snow Beck, M. D., F. R. S., Physician to the Farrington General Dispensary and Lying-in Charity.—The conflicting opinions which have been expressed by practitioners as to the absence or presence of ulceration at the orifice of the uterus, appear only to be accounted for by referring to the different senses in which this word has been used. At first sight it appears strange, that two opinions should exist as to the meaning of a word the definition of which is so generally agreed upon; yet it is, nevertheless, certain, that in regard to the diseases of the uterus, it has been employed to denote morbid conditions which are very different from ulcerations, in the received acceptation of the term.

The definition given by all surgeons is essentially the same. Thus, for example, Boyer states: "An ulceration is a solution of continuity of the soft parts, more or less ancient, accompanied by a purulent secretion, and kept up by some local or internal cause;" and Samuel Cooper says: "Surgeons usually define an ulcer to be a solution of continuity in any of the soft parts of the body, attended with a secretion of pus, or some kind of discharge." Authors on practical medicine and pathology likewise adopt a similar definition. Dr. Copland considers "ulceration is distinguished from suppuration chiefly by its being attended by a loss of substance, by a destruction of parts, and by a more or less abundant secretion of puriform, ichorous, fetid, sanious, or variously-colored fluid." Dr. Watson writes: "We may say, with Dr. Allison, that, whenever the absorption of the effused lymph, and of the surrounding textures, takes place in excess—in a greater degree, that is, and more irregularly than seems to be required for any useful purpose—the result is *ulceration*. The term is, however, commonly restricted to those cases in which the loss of substance occurs upon some *surface*, internal or external." Dr. Williams defines an ulcer to be "a solution of continuity or excavation, the bottom and edges of which continue to discharge pus, or a serous fluid mixed with exudation corpuscles, and sometimes blood corpuscles." Chomel states, that "ulcers are solutions of continuity maintained (*entre tenues*) by an internal or local disease." Andral says, "The term ulcer is applied to that solution of continuity which is produced in a tissue by the absorption of its molecules."

According to these definitions, to which many more might be added, the essential character of ulceration is a solution of continuity or excavation, or a loss of substance in a part; for it is evident, that the discharges which usually accompany this lesion are not characteristic of, nor essential to it, inasmuch as they are also products of simple inflammation of a mucous membrane. The accuracy of these definitions are confirmed by more recent observation of morbid phenomena by the aid of the microscope, which has shown, that, previous to ulceration taking place, the blood becomes stagnant, and adheres to the walls of the vessels, that the neighboring tissues thus lose their vitality, by changes similar to what occur in mortification, and, being carried away by effused fluid, a solution of continuity, or loss of substance, is produced. To express this series of morbid changes in a short phrase, many patholo-

gists define ulceration as "molecular death," or "molecular gangrene." But this does not in any way alter the essential character of the previous definitions: for, when "molecular death or gangrene" occurs in any tissue, "a solution of continuity, or loss of substance" in that tissue is the inevitable result.

Admitting, then that these definitions correctly express the essential character of ulceration, we may inquire, whether this term has been applied with propriety to many morbid states of the orifice of the uterus. At the late discussion at the Royal Medical and Chirurgical Society, Dr. Murphy is reported to have said: "A girl was admitted into the hospital (University College) dying from the effects of opium. At the autopsy, he had examined the uterus, and found an ulcer on both lips extending into the cavity. It was seen by the pupils, and was sent to the curator to be preserved, but the next day it had lost all its characters, and was thrown aside." With all respect for Dr. Murphy's high standing in the Profession, and the personal esteem which must be felt by all who know him personally, I can only come to the conclusion, that some source of error must exist in this statement. A solution of continuity, or a loss of substance, on the lips of the uterus, would have been as readily recognised the day after the autopsy as on the day of the examination; and, if the supposed ulceration "had lost all its characters the next day," is it not certain that ulceration had not existed, and that some other morbid appearance had been mistaken for it? How could the loss of substance be repaired? And, if still present, it would have been recognised. I feel the greater confidence in speaking upon this subject, since I have carefully searched during some years for these reputed ulcerations in my own practice, and in the hospital practice of other physicians, without being enabled to discover them. During this period, I have seen many cases of inflammation of the mucous membrane covering the lips of the uterus, and even extending into the cervical canal, which presented a red and granular appearance, and which had been designated ulceration, but wherein no loss of substance or solution of continuity existed. Sometimes the glands in the mucous membrane were chiefly implicated in the inflammation, and each being surrounded by a defined circle of redness, they presented, when grouped together, a circumscribed and defined granular patch, studded with minute pits or holes, which led to the orifices of the glands. In these cases, the pathological condition did not differ from that of chronic inflammation in other mucous membranes, as, for example, in the granular condition of the conjunctiva; in the state of the mucous membrane of the stomach, to which the name of mammillation has been applied, in the condition sometimes observed in the urethra of the male after gonorrhœa, etc. In these instances, there is no loss of substance in the membranes, nor has any one contended that ulceration was present; yet this name has been applied to the same morbid conditions when observed in the mucous membrane of the vagina, or in that covering the lips of the uterus. With this explanation, it can readily be understood, that an inflamed mucous membrane might lose its characteristic appearances the day after the autopsy, especially if it had been immersed in any fluid; but if a

loss of substance or an ulcer had existed, that ulcer would have been as readily discovered the next day, as on the day on which the first examination was made.

At the same meeting of the Society, a letter was read from Mr. Holl, detailing the result of his *post-mortem* examinations, and bearing upon this subject. Dr. H. Bennett afterwards remarked: "That it appeared to him that Mr. Holl's guarantee for the correctness of his opinions was all that could be desired, as he was practically acquainted with the lesions to which that part is subject in the living state; that he had carefully examined the condition of the parts, and stated in his letter,—'The whole number of bodies in which the state of the uterus was examined was 44; of these 34 either presented no disease of the cervix uteri, or only slight congestion, with the exception of 3, in whom the congestion was considerable. Of the remaining 10 cases, 9 of them presented more or less extensive abrasion of the epithelium from around the os uteri, but no ulceration. The pelvic veins were generally full of blood; the cervix uteri large, swollen, and puffy, with more or less venous congestion of the mucous and sub-mucous tissues, but no induration or effusion of lymph into its texture. The glands of Naboth were enlarged, and the canal of the cervix blocked up with viscid mucus. The removal of the epithelium appeared to commence at the follicles which surrounded the cervix uteri." Dr. Bennett, having read the letter, drew attention to the fact, that Mr. Holl, having a knowledge of these special lesions, and having specially investigated them in the autopsies, discovered 10 cases out of 44, or 37 per cent., in which there existed abrasion, or ulceration of the uterine mucous membrane,—conditions which he (Dr. Bennet) considered pathologically identical. This, however, appears a perversion of Mr. Holl's words, who distinctly says, "there was abrasion of the epithelium, *but no ulceration.*" After lauding Mr. Holl's knowledge of these special lesions as offering a guarantee,—all that could be desired for the correctness of his opinions,—it appears a singular proceeding to ignore his knowledge, and contradict the opinion founded upon it. Would it not have been more consonant with the facts to have stated, Mr. Holl said he had found nine cases of abrasion of the epithelium, but no ulceration; yet this statement was erroneous, as, in reality, there were cases of ulceration? And that this conclusion was come to, in opposition to the former praise, because abrasion of the epithelium and ulceration were considered conditions pathologically identical. But is this the fact? Are these lesions pathologically identical?

The essential character of ulceration—that it is a solution of continuity or loss of substance in a tissue—has been sufficiently proved, and the pathological changes which occur have also been pointed out. In abrasion, or excoriation, the epithelial covering of the mucous membrane is removed, but the substance of the membrane itself remains uninjured. There is no solution of continuity, or excavation, or loss of substance in the part, and this constitutes the essential difference between the two lesions—abrasion, or excoriation, and ulceration. The pathological changes which occur are equally distinct. In ulceration, the blood be-

comes stagnant, adheres to the sides of the vessels, the vitality of the part is destroyed, molecular death or gangrene being induced. In excoriation, the blood flows on without interruption or stagnation; a portion of serum is effused beneath the unorganized epithelium, which, being detached, is subsequently removed. The changes which occur may be compared to the effect of an exceedingly minute and mild blister, active in its character, acute in its course; whilst ulceration is the consequence of minute mortification, usually slow in its action, chronic in its course. The difference between the two lesions, and the pathological changes which occasion them, thus appear to be well defined; but there is one point of view from which the two might be confounded. The first change occurring in a mucous membrane about to undergo minute gangrene is, in some cases, the effusion of bloody serum beneath the epithelium, and the subsequent desquamation of this part. And if we were to inquire no further into the changes going on, it might be concluded that, as there is desquamation of the epithelium in the beginning of the process of ulceration, and also in excoriation, that hence the two states are pathologically identical. But this would be a very superficial mode of considering the question. In the changes which produce ulceration, desquamation of the epithelium is not the only alteration which takes place in the membrane; for, after its removal, the surface appears livid and dark-colored, the tissues having lost their vitality, and the vessels of the part being blocked up, as in mortification. But in excoriation, the separation of the epithelium is the first and only change which occurs in the tissues of the membrane, which, after its removal, appears red and florid, the vessels being pervious, and the blood circulating through them. Excoriations, then, are the consequence of inflammation of the mucous membrane, or, as some have expressed, of catarrhal inflammation, more or less acute; ulcerations are the results of molecular gangrene, or mortification, the sequence of disease extending into the deeper tissues of the organ. Thus, even from this point of view, it would be illogical and erroneous to consider these two morbid conditions as pathologically identified.

The importance of this subject is greatly increased when considered in relation to the treatment of the diseases of the uterus. From many communications I have received, I have no doubt that the idea of having so loathsome a disease as "ulceration" on the uterus, has induced many females to submit to the employment of the speculum, and escharotics; while the same term has been considered by practitioners as a justification for this mode of treatment. It is thus intimately connected with the proper or improper use of the speculum, in the treatment of uterine disease. Where ulceration really exists, which is very rare, unless it be specific ulceration, the local application of escharotics by the aid of the speculum, during the later stages of the disease, is, no doubt, an useful adjunct to the other means of cure; but when excoriation only is present, or a reddened and swollen state of the mucous membrane, conditions which accompany inflammation more or less acute, the employment of these therapeutical agents is not only improper, but frequently most injurious.

It appears to have been overlooked in the discussions on this subject, that neither excoriations nor ulcerations are, in themselves, the essential disease; but that they are merely symptoms or evidences of the existence of other diseases which have produced these morbid states. This is well shown in Mr. Holl's account of the morbid appearance, where "the pelvic veins were generally full of blood, the cervix uteri large, swollen, and puffy, with more or less venous congestion of the mucous and submucous tissues, but no induration or effusion of lymph into its texture. The glands of Naboth were enlarged, and the canal of the cervix blocked up with viscid mucus,"—distinct evidences of inflammation of the substance of the organ,—while "the removal of the epithelium, which appeared to commence at the follicles surrounding the cervix uteri," was but a sign of this inflammation affecting the glands imbedded in the tissues of the part. Viewed in this light the application of escharotics to remove a symptom, whilst the disease producing it is unheeded, is undoubtedly not the correct course to pursue; nor can it be correct to endeavor to remove the symptom of acute inflammation of the mucous membrane—excoriation—by the application of substances which increase the inflammation already present. This mode of designating a reddened and swollen mucous membrane an ulceration, and including in one group diseases which are pathologically distinct, and which require opposite methods of treatment, has been productive of a serious amount of mischief in the treatment of uterine affections. Thus, in subacute inflammation of the mucous membrane of the vagina, where the membrane is red and swollen, and where the symptoms were, pain deep in the hypogastrium, pain on passing the fæces or urine, a mucous or purulent vaginal discharge, with pain across the forehead, and other constitutional symptoms, I have known the speculum employed, and the nitrate of silver applied, in consequence of the practitioner being misled by the idea that extensive ulceration existed. As might be supposed, this treatment was followed by great increase in the symptoms for several subsequent days, without any permanent advantage. On the other hand, in some exceptional cases of chronic vaginitis, which chiefly involves the upper part of the vagina, and where lotions have been inefficiently employed, either from inattention or want of management on the part of the female, the local application of strong stimulants has altered the morbid action, removed the thickened or mammilated condition of the membrane, subdued the vaginal discharges, and other symptoms. But these are only exceptional cases, and, by no means form the general rule. Similar errors have been committed in respect to the diseases of the uterus itself. In cases of inflammation of the organ, the redness of one of the lips, or the red appearance of the lining mucous membrane, have been treated by the application of escharotics, and followed by much augmentation of the inflammatory action in the deeper tissues. Even in those cases where ulceration, or a loss of substance, has really existed, much injury results from concentrating the attention too much upon this lesion, and neglecting the diseases or morbid states to which it owes its origin. What surgeon would think of applying powerful local applications to an ulcer on the leg, in the

expectation of curing it, until he had first removed the state of the venous circulation upon which the continuance of the ulcer depends? Yet this is exactly what has been continually done in the treatment of diseases of the uterus.

These principles were well expressed by Professor Dubois, during the discussion before the Academy of Medicine at Paris, in 1850: "The value which has been given by one of our colleagues to ulcerations, if this were real, leads to consider them as one of the local conditions the most worthy of attention in practice. I cannot, for my part, adopt this manner of view; according to my appreciation, these lesions, as well as "engorgements," are only consequetive phenomena of another alteration (inflammation) which has preceded them, and have in general in regard to the symptoms and treatment, but a secondary importance."—*Bulletin.* *London Lancet.*

## ANATOMY AND PHYSIOLOGY.

*On the Occasional Organic Union of Contiguous Teeth.* By S. J. A. Salter, M. B., etc. (Communicated by Thomas Bell, Esq., Sec. R. S.)—The object of this paper is to enumerate fresh examples of the so-called "bony" union of contiguous teeth; to explain the true nature of that union, as exhibited by microscopical scrutiny; and to suggest the probable mode of its formation.

1. The fresh instances here recorded are, a united dens sapientiæ and supernumerary tooth of the lower jaw; a cuspidatus and lateral incisor of the lower jaw united; and a specimen exhibiting the lateral and central incisors of the lower jaw in the same condition. These are particularly described.

2. In the next place, the nature of the uniting medium is shown to be dentine and not crusta petrosa, (as stated previously by writers on this subject.) This is demonstrated by microscopical drawings of sections of the teeth.

3. The probable mode by which this abnormity is produced is explained thus:—The pulps of the teeth form in their usual place and usual relation, with this one exception, that the portion of the capsule which should separate them is wanting. The result is, that they come in contact, and when the soft dentinal elements commence calcifying they unite, and the tubes of the two teeth become continuous. There is no enamel between the teeth where the crowns are in contact. The author further remarks, that all the teeth, and in both jaws, have been subjects of this peculiar condition. The paper concludes with a few practical remarks—that, in the majority of cases, the union could not be discovered while the teeth were in the mouth; and that, even where it could be discovered, both teeth must necessarily be removed together, should extraction of either be required, as there appears no means of separating them.

Mr. Streeter would ask whether these teeth might not be examples of duplex formation, like the double uterus, etc., and not the result of union. The inscription on the drawing sent round, certainly describes

the teeth as the bicuspid and the incisor, but they looked like a duplex formation, and he did not see why that process should not occur in the teeth.

A Visiter thought, that if such were the case, the regular number of the teeth would be imperfect, which did not in this instance appear to be the case.—*Trans. Royal Med. and Chir. Society in London Medical Times.*

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*On the molecular origin of the tissues.* By Dr. BENNETT.—The great generalisation of Schwann was that all tissues are derived from cells. Subsequently, it was ascertained that the nucleus, or cell-germ, exercised an influence on the tissues, indepeudent of its cell wall; and it was endeavored to be shown, that some tissues might be derived directly from nuclei. The object of this communication was to point out that the nuclei themselves originated from smaller bodies,—viz., molecules; that these were the origin of every texture, and to indicate some of the laws which governed their formation, arrangement, and subsequent developement. From a review of the observations of Schleiden, Schwann, and Martin Barry, the author pointed out how the first appearance, observable in all developing organisms, was a mass of molecules and granules, which, by aggregating or melting together, constituted the cell-germ. Around the cell-germ other molecules were formed, which again, by melting together, constituted the cell-wall. Further development, in like manner, proceeded by the apposition of molecules. At any period in the process of evolution, the onward progress might be checked when the structure became disintegrated in the inverse manner to its formation: First the cell wall became dissolved, then the nucleus, both of which were reduced, first to molecules then to a fluid. Hence there were molecules of evolution and molecules of disintegration. Occasionally, between the cell wall and nucleus, secondary molecules were formed, which constituted peculiar secretions, as they have been termed. These might be called molecules of transformation.

The author described the origin and mode of formation of these three kinds of molecules, their physiological and pathological importance, and pointed out the advance which had been made in our knowledge of molecular formation by the observations of Ascherson, Harting, and Melsen.

In complex organisms, the higher tissues were formed by an elaboration of blastema, mainly due to the successive evolution, transformation, and disintegration of matter, by means of the different kinds of molecules, of which the author gave numerous examples, derived from the elaboration of the ovum, of the blood, the transformation of insects, the process of fissiparous division in the lower animal forms, etc. He pointed out that molecules had independent movements, sometimes physical, as in the case of Brown's molecular movements, at other times vital, as seen in many organisms. That occasionally we had molecular fibres, from the aggregation end to end of molecules, in the same way as we have nuclear cell fibres. Moreover, each kind of fibre could assume inherent contractility, as in the case of vibriones, which might be called contractile molecular fibres, as spermatozoa might be denominated contractile nuclear, and cilia contractile cell fibres.—*Lond. Monthly Jour.*

THE

# MEDICAL EXAMINER,

AND

## RECORD OF MEDICAL SCIENCE.

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## ORIGINAL COMMUNICATIONS.

### *Experimental Researches applied to Physiology and Pathology.*

By E. Brown-Séquard, M. D., of Paris.*

#### I.—ON THE SOURCE OF THE VITAL PROPERTIES.

I think that every tissue possesses its vital properties, in consequence of its peculiar organization, and that in a completely developed animal, nutrition is the source of the vital properties, inasmuch as it is the cause of the maintenance of organization.

I will try to prove the correctness of my opinion, by the following remarks on some of the vital properties of the spinal cord, the nerves, and the muscles.

[* The paper which we have the pleasure of presenting to our readers from Dr. Brown Séquard, is a resumé of many researches made by the author, a part of which only have hitherto been published in any of the foreign journals.

The conclusions arrived at are the result of eight years exclusive devotion to the experiments upon which they are based.—Eds. Ex.]

a.—*Source of the reflex faculty in the spinal cord.*

Notwithstanding the experiments of Redi, Whytt, Prochaska, Unzer, Sénac, Fontana, Caldani, Sir G. Blane, Fray, Legallois and many other experimenters; and notwithstanding the much more important experiments of Marshall Hall, Müller, Grainger, Volkmann, Kürschner, Pickford, de Martino, Buchner, Mayer, Paton and Stilling, the existence of the reflex faculty, after the spinal cord has been separated from the encephalon, is not considered by all physiologists as a proof of the independence of the spinal cord. J. W. Arnold and Flourens still maintain that the medulla oblongata is a centre, giving life to the other parts of the nervous system. The reflex faculty possessed by the spinal cord after it has been separated from the encephalon, is considered by J. W. Arnold as a remainder of something given to the spinal marrow by the encephalon, before their separation.

My experiments prove the incorrectness of that opinion.* I have found that after having exhausted the reflex faculty by putting it in action, energetically and frequently, in an animal on whom the spinal cord is separated from the encephalon, it reappears, and becomes soon as energetic as before, provided that the circulation of blood takes place in the cord. Moreover I have found, that if the reflex faculty is put in action frequently, it is able to produce an immense quantity of action: thus, for instance, it can stimulate sufficiently the muscles of a frog's leg to make them raise, in an hour and in divided portions, about twelve pounds, to the height of about two lines. In a pigeon the reflex faculty is able to stimulate the muscles of a leg so far as to make them raise fifty pounds, by fractions, in an hour, to the height of more than one inch.†

I shall add two other decisive proofs:—1. The reflex faculty is very weak in frogs immediately after the spinal cord has been separated from the medulla oblongata, and it increases afterwards, as R. Whytt and Marshall Hall have discovered. I have stated that it increases so much that the posterior limbs are able

* See:—Recherches et expériences sur la physiologie de la moelle épinière. Thèse inaugurale. Paris, 3 Janvier, 1846.—Comptes rendus des séances de l'Académie des Sciences. Paris, 1847 T. xxiv. p. 849.

† See Gaz. Méd. de Paris. T. 4. 1849. p. 233.

to draw up, by reflex action, more than double the weight the animal could raise up by an action of its will before the division of the cord. 2. After having divided the spinal cord in the dorsal region on a mammal, I kill it by cutting the right carotid artery. A few minutes after the cessation of reflex action I inject blood by the opening made in the carotid. Then life returns and with it the reflex faculty.

All these facts demonstrate positively that the reflex faculty is a vital property belonging to the spinal cord, and that its source is in the nutrition which maintains the organization of that nervous centre.

b.—*Source of the vital property of the motor nerves.*

The independence of the motor nerves is denied by almost all physiologists. They believe that the nervous centres are the sources of the vital property of these nerves. They base their opinion on this fact, that the motor nerves separated from the nervous centres soon lose their property, as it has been seen by Fontana, Haighton, Astley Cooper, Steinrueck, Müller, Sticker, Günther, Schoen, Kilian, Stannius, Helmholtz, Martin-Magron and others.

But, *in the first place*, if the motor nerves of the warm-blooded animals lose their vital property after having been separated from the nervous centres, it is not less positive that they retain it during several days. *Secondly*, if the vital property of the motor nerves is exhausted by very energetic action, it reappears after a short time, although the nerves are separated from the cerebro-rachidian centre, provided that the circulation of blood continues in them. *Thirdly*, if the circulation of blood is stopped in a limb in which the nerves have been divided, it is found that the peripheric portion of the divided nerves lose their vital property before the muscles. After the nerves have been left dead, *i. e.*, deprived of their vital property for a quarter of an hour, half an hour, and even more, blood is allowed to circulate anew in the limb. Then the vital property of the cut nerves returns, and, to produce a muscular contraction, only a slight compression upon them is necessary.* If the

* See Comptes rendus de l'Acad. des Sciences. T. xxxii. Séance du 9 Juin, 1851.—Gaz. Médic. de Paris. 1851. T. vi, p. 359.

motor nerves lose their property when they are separated from the nervous centres, it is because they are then badly nourished. Nerves as well as muscles must be exercised, in order to be well nourished.

### c.—*Source of the muscular contractility.*

Although there are some facts which appear strongly to prove that the vital property of the muscular tissue is independent of the nervous system, many physiologists persist in their opposition to Haller's doctrine on this subject. Therefore I have thought necessary to add new proofs to those already known, and I have published many experiments, of which I shall relate here only two of the most decisive.*

1. The sciatic and the crural nerves having been resected, for ten or twelve days, on a rabbit or a guinea-pig, I examine if these nerves have completely lost their vital property, and if the muscles are still contractile. When this has been ascertained, I put a ligature around the aorta. Then muscular irritability disappears after a certain time and cadaveric rigidity appears. Three quarters of an hour or even an hour after the complete disappearance of the muscular irritability, and the appearance of the *rigor mortis*, I cut off the ligature, and I find, after ten or fifteen minutes, that the rigidity disappears and the contractility reappears. I need not say that the nerves do not regain their lost property. This fact clearly proves that the contractility is given to the muscles by blood, *i. e.*, by nutrition, and not by the nervous system.

2. Many experiments have shown to me that muscles paralyzed for five days or a little more, in consequence of the division of their nerves, remain much longer contractile after the death of the animal than the non-palsied muscles. This would hardly be the case if the contractility was given to muscles by the nervous system.

* See:—Bulletin de la Soc. Philomat. 1847, p. 74.—Gaz. Méd. de Paris, 1851, t. vi. p. 619, and 1852, t. vii. p. 72.

## II.—RESEARCHES ON THE REFLEX FACULTY.

During the last seven years I have published many papers relating to the reflex faculty.* Among the facts which I have discovered I will mention the following:

1. Grainger had found that the act of suckling can be executed by an animal deprived of its brain. I have found that even after the ablation of both the brain and the cerebellum, newly-born rabbits are able to suckle very well; which is a proof that suckling may be executed by reflex action.

2. It is commonly affirmed that the reflex power is much stronger in cold-blooded than in warm-blooded animals. This opinion is correct so far as regards the contrast between Mammals and Batrachia (the animals usually compared); but it is incorrect if Birds are compared with Reptilia and Fishes. It has been said that the higher an animal is in the scale the less it has reflex power. If this be true, we should find more and more reflex power from Mammals to Fishes; but the real order, according to my experience is: 1st, Fishes; 2d, Mammals; 3d, Amphibia and Reptilia; 4th, Birds; so that Birds have more reflex power than all the other animals, and Mammals have more than Fishes. Of course, there are exceptions to this rule in the case of particular species; thus the eel, carp and tench have as much reflex power as many Mammals possess.

It has also been commonly affirmed that the reflex power diminishes with age, being the greatest in young animals. This statement, also, has been based on a too limited induction. In Reptiles and Fishes no difference can be detected in this particular. In Birds it is decidedly the other way, the reflex power being much the strongest in adults. Among Mammals the difference is usually in favor of the young animal; not, however, at the very earliest part of its life, but ten or twelve days after birth. As to man the reflex power appears to be greater in him than in Fishes and Mammals; but it is not so energetic as in Birds and in Amphibia.

I have found that the causes of the differences between differ-

* See my Inaugural Dissertation, Paris, 3 Janvier 1846, 1ere partie.—Comptes rendus de l'Acad. des Sciences, 1847, t. xxiv. pp. 363 et 859.—Gaz. Med. de Paris, 1849, t. iv. pp. 430 et 644; et 1850 t. v. pp. 98 et 476.

ent animals, as regards the energy of their reflex power, are to be explained by anatomical differences. There exists a constant relation between the degree of the reflex power and the amount of grey matter in the spinal cord. It appears, also, that the mode of circulation of the blood in the spinal marrow has a great share in the causes of differences amongst different animals.

3. It is not necessary for the existence of the reflex power that the spinal cord should be without alteration. I have found the reflex faculty remaining in pigeons after I had crushed the spinal cord, and produced in it a considerable alteration. This is important to be known by practitioners, to prevent their drawing the conclusion, from the existence of reflex action after a fracture or a luxation of the vertebral column in man, that the spinal cord is healthy.

4. The influence of the nervous system on the secretions, by a reflex action, has been very little studied. I will state two examples of these reflex secretions: 1st, There is on the face, and particularly on the forehead and the nose, an abundant production of sweat when the nerves of the taste are strongly excited, as they are, for instance, by common salt, pepper, sugar, etc. In certain persons the quantity of sweat produced in such cases is sometimes, even in the winter, very considerable. 2d, I have observed that it is sufficient to excite the nerves of taste in order to produce the secretion of gastric juice, bile and pancreatic juice.

### III.—RESEARCHES ON THE INFLUENCE OF THE NERVOUS SYSTEM UPON THE FUNCTIONS OF ORGANIC LIFE.

My experiments have convinced me that if it is certain that the nervous system is able to act, and frequently does act, on the functions of organic life, it is not the less certain that the action of the nervous system on these functions is not necessary. I hope this will be sufficiently demonstrated by the numerous facts I have to relate.

#### a. *Influence of the section of nerves on nutrition and secretion.*

1. The frequent occurrence of certain pathological changes after section of the sciatic nerve in Mammals, has been cited as

a proof of the dependence of the nutritive operations upon nervous agency. I think the following experiments give evidence against that doctrine. I have divided the sciatic nerve in a number of rabbits and guinea-pigs, and placed some of them at liberty in a room with a paved floor, whilst I confined others in a box, the bottom of which was thickly covered with bran, hay and old clothes. In a fortnight, the former set exhibited an obviously disordered action in the paralysed limbs; the claws were entirely lost; the extremities of the feet were swollen, and the exposed tissues were red, engorged, and covered with fleshy granulations. At the end of a month, these alterations were more decided, and necrosis had supervened in the denuded bones. On the other hand in the animals confined in the boxes, no such injuries had accrued; and although some of them have been kept living for four, five and even six months after the division of the sciatic nerve, no alteration whatever has appeared in the palsied limbs except atrophy. In these cases a portion of the nerve had been cut off, so that reunion was nearly impossible and did not take place.

Experiments made on pigeons have given the same results.

It is obvious from these experiments that the pathological changes which occur after the section of the sciatic nerve do not proceed directly from the absence of nervous action, but that they are consequent upon the friction and continual compression to which the paralysed limbs are subject, against a hard soil, owing to the inability of the animal to feel or avoid it.

In similar experiments made on frogs, I found that no alteration took place, except when water penetrated through the wound, under the skin, and between the muscles.*

2. With the help of an eminent micrographer (Dr. Lebert), I have made researches on the influences produced on the capillary circulation in consequence of the section of all the nerves (sympathetic and cerebro-spinal nerves) in the legs of a number of frogs. We have found no appearance of trouble in the capillary circulation, neither in an hour, nor in three or four days after the division of the nerves.

3. When resection of a long portion of one of the sciatic and the crural nerves is made on a very young rabbit, guinea-

* See Gaz. Méd. de Paris, 1849, t. 4, p. 880.

pig or pigeon, the palsied limb continues to grow in length, but it grows only very little, if at all, in thickness. When the experiment is made on all the nerves of the wing in a very young pigeon, it is also found that the wing grows in length, but very little in breadth or in thickness. The secretion of quills takes place equally as well in the palsied limb as in the other.

The difference in all these cases between the length of the sound and that of the palsied limb or wing is never very considerable; nevertheless the length of the healthy parts is greater than that of the paralysed parts.

4. I have found that burns, wounds and ulcerations existing in parts palsied in consequence of the section of their cerebro-spinal nerves, are cured as quickly and as well as those in sound parts.

5. Atrophy is a constant consequence of the section of the nerves of a limb. I have found that it supervenes not only in the muscles and the bones, as J. Reid has discovered, but also in the skin, which becomes evidently thinner.

6. Krimer asserts that after the section of the nerves of a limb in Mammals, the venous blood is of a bright red color like the arterial blood. (Physiologische Untersuchungen, Leipzig, 1820, p. 138 exp. 1, and p. 152 exp. 9.)

Long before the publication of Krimer, Arnemann had declared that the blood appeared darker than usual in a limb on which all the nerves had been cut. (Versuche über die Regeration an lebenden thieren, Gottingen, 1786, t. i., p. 48.).

Longet (Traité de Physiologie, Paris, 1850, t. ii., B. p. 92,) says that he has seen the venous blood retaining its ordinary color even three days after the section of the nerves of the anterior limb in dogs.

Who is right—Krimer, Arnemann or Longet? Neither of them is perfectly right. The assertion of Arnèmann is entirely incorrect. By experiments made on dogs, rabbits, guinea-pigs and pigeons, I have found that the venous blood in palsied limbs is evidently less black than it is in sound limbs. But it is not true to say that venous and arterial blood in paralysed limbs have the same color. It is always very easy to distinguish one from the other.

The transformation of the arterial blood into venous is not so

complete in the palsied as in the sound limb, but it always takes place even in a great measure. There is a good proof of this in the result of my experiments on the hand and forearms of two decapitated men. I injected blood in the arteries of these parts thirteen or fourteen hours after death and when cadaveric rigidity existed. Surely there was in that case no nervous action whatever, and nevertheless the blood, which was of a bright red color when injected, came out nearly black from the veins!

From all these facts I shall conclude:

1st, That the nervous action (that of the sympathetic as well as that of the cerebro-spinal nerves) is not necessary for the change of color of the blood in the capillaries.

2d, That the nervous system of animal life has an influence upon nutrition by which it takes a share in the transformation of arterial into venous blood.

7. My friend Dr. Cl. Bernard has recently discovered the curious fact, that after the section of the sympathetic nerve in the neck, the face on the same side and more particularly the ear, become warmer and more sensible than the other side. The blood-vessels are much enlarged and a great many are visible which were not so before the operation.

I have found that the remarkable phenomena which follow the section of the cervical part of the sympathetic, are mere consequences of the paralysis and therefore of the dilatation of the bloodvessels. The blood finding a larger way than usual, arrives there in greater quantity; therefore the nutrition is more active. Now the sensibility is increased because the vital properties of the nerves are augmented when their nutrition is augmented. As to the elevation of the temperature, I have seen, as Dr. Bernard has, that the ear exhibits, sometimes, one or two degrees Fahr. more than the rectum; but it must be remarked that the temperature of the rectum is a little lower than that of the blood; and as the ear is full of blood, it is very easy to understand why it has the temperature of the blood. A great many facts prove that the degree of temperature and of sensibility of a part, is in close relation with the quantity of blood circulating in that part.

I base my opinion in part on the following experiments: If galvanism is applied to the superior portion of the sympathetic

after it has been cut in the neck, the vessels of the face and of the ear after a certain time begin to contract; their contraction increases slowly, but at last it is evident that they resume their normal condition, if they are not even smaller. Then the temperature and the sensibility diminish in the face and the ear, and they become in the palsied side the same as in the sound side.

When the galvanic current ceases to act, the vessels begin to dilate again, and all the phenomena discovered by Dr. Bernard reappear.

I conclude, that the only direct effect of the section of the cervical part of the sympathetic, is the paralysis and consequently the dilatation of the bloodvessels. Another evident conclusion is, that the cervical sympathetic send motor nerve fibres to many of the bloodvessels of the head.*

8. Nearly all physiologists believe that the secretion of the gastric juice is stopped after the section of the two pneumogastric nerves. It is difficult to solve the question by experiments on warm-blooded animals, because they die too quickly after the section of the vagi. But it is not so with frogs. I have found that they are able to live perfectly well either after the extirpation of the medulla oblongata, or after the extirpation of the ganglia of the par vagum. In both these cases I have found that digestion continues to be performed. Consequently, if the gastric juice is necessary to digestion, it is certain that this liquid is secreted.†

* My experiments prove, also, that the bloodvessels are contractile, and that the nerves are able to put them in action. I have also to remark that it is a fact, well established by Budge and Waller, that the cervical sympathetic is one of the motor nerves of the iris, and that the spinal cord is the origin of the nerve-fibres going from the sympathetic to the iris. Some experiments, which I intend to perform again, appear to prove that the same parts of the spinal cord which give origin to some of the motor nerve-fibres of the iris, originate also the motor nerve-fibres going from the cervical sympathetic to the vessels of the head. Another conclusion is to be drawn from the results obtained by Budge, Waller, Bernard and myself; it is that the cervical sympathetic, instead of receiving its fibres from upwards to give them downwards, receives them downwards and distributes them upwards.

† Comptes rendus de l'Acad. des Sciences. Paris, 1847. T. xxiv. p. 363–64.

9. J. Reid has found, that if the four nerves uniting the spinal cord to the posterior limbs are cut across on both sides, in frogs, and if a galvanic current is applied every day to the palsied limbs on one side, these galvanized limbs retain their natural dimensions, while the palsied limbs not galvanised become atrophied.

I have found:—1. That if, instead of cutting only the four cerebro-spinal nerves of the posterior limbs, I divide also the branches of the sympathetic nerve which unite with them, the same results are obtained as in Reid's experiment. 2. That if a like experiment is performed on dogs, guinea-pigs, rabbits and pigeons, the same results are found. 3. That if after atrophy has taken place in the limb of a mammal or a pigeon, a galvanic current is applied, every day, during several weeks, the atrophy diminishes little by little and the limb at length becomes as large as a sound limb. This happens although there is no return of vital property in the divided nerves. 4. That if the application of galvanism is made on the palsied limbs of very young animals, and continued every day until they have arrived at adult age, these limbs are then found to have grown as much, in every respect, as the sound limbs.

In addition to these facts I have to state that in cases of lead palsy, in which the extensor muscles, as far as I have been able to judge, were completely destroyed and replaced by fibrous tissue, I have seen muscles created by galvanism and becoming as strong as they are in healthy men.

In a case, which I published two years ago, (Gaz. Méd. de Paris, 1850, t. v. p. 169,) I have found that an increase of five centimetres in circumference took place in the superior part of the leg of a young gentleman, under the influence of galvanism, applied three quarters of an hour each day for six days.

In all the facts before related, galvanism acts by two ways: the one is that it exercises the muscles, and increase in consequence their nutrition; the other is that it produces directly some of the chemical changes which constitute nutrition.

The atrophy, which happens in paralyzed muscles, takes place mostly because they remain without exercise, and partly because when nervous action is deficient the respiration of the muscles is not carried on as well as when the nervous system acts upon

them. Galvanism applied to a palsied limb acts partly in producing the transformation of arterial into venous blood, *i. e.*, what Gustav Liebig calls the respiration of the muscles. I have seen frequently the venous blood, in palsied limbs, becoming as black as normal venous blood, after the application of galvanism. This change of coloration is not produced by a direct chemical influence, exerted by galvanism on the blood, for if galvanism is applied to blood in a vase, nothing of that kind is seen. It is in consequence of an interchange between blood and the living tissues that the change of color happens. The muscular contraction which takes place under the influence of the nervous system, or that of galvanism, produces, in both cases, an increase in the darkness of the venous blood. This fact proves that the consumption of oxygen by muscles is increased during their contraction.

I conclude from the preceding facts :—

1st. Nervous action is not necessary for nutrition.

2d. Atrophy in palsied limbs is more a consequence of absence of exercise than of any other cause.

3d. Muscular atrophy, at any stage, may be cured by galvanism.

b.—*Influence of the nervous centres on nutrition and secretion.*

1. Every one knows the singular alterations which take place in the eye after a contusion of the frontal nerve, or a section of the trigeminal or the cervical sympathetic nerves. Every one knows also that the existence of worms in the intestinal canal, and also certain affections of the spinal cord, are able to produce morbid phenomena in vision, and even diseases of the eye, and especially amaurosis. I have found that after the section of a lateral half of the spinal cord, it sometimes happens that the eye, on the same side where the cord has been wounded, will present strange and various alterations. The part of the cord having that influence on the eye, lies between the ninth and the twelfth costal vertebræ. The alteration exists generally in the cornea. In one case a ridge appeared on the anterior surface of that membrane four days after the operation. On the fifth day the ridge was deeper, and its edges had become opaque; on the sixth day all the cornea was opaque. It remained so for

five days, after which the opacity disappeared and no trace remained of it, or of the ridge. This experiment has been made on guinea-pigs.

2. I have found a considerable hypertrophy of the two supra-renal capsules, on eight or ten guinea-pigs, upon which a lateral half of the spinal cord had been cut in the dorsal region, for eight, ten or fifteen months. These organs had acquired, in some of these cases, three times their natural dimensions, and in others only the double. There was no appearance of change in their structure.

By an examination of the supra-renal capsules in guinea-pigs, on which I had made the section of a lateral half of the spinal cord, a few hours or a few days previously, I have found these organs congested, and sometimes containing even a slight effusion of blood. It is very probable that such a congestion has been the cause of the hypertrophy found in animals operated on at a much longer time previously. The congestion is certainly the result of a peculiar disturbance in the nervous action. A part only of the spinal cord appears to possess that singular influence on the supra-renal capsules. That part is extended, in guinea-pigs, from the tenth costal vertebra to the third lumbar.

A simple puncture of the cord is frequently sufficient to produce the congestion of both supra-renal capsules.

3. The researches, made before mine, as to the influence of the spinal cord on the urinary secretion, could not give a decided result, because no physiologist had been able to keep any warm-blooded animal living a sufficient time, after the destruction of a large part of the spinal cord.

The results obtained by Ségalas on some animals who have lived from fifteen minutes to an hour after the destruction of the lumbar part of the cord, had led him to conclude that the spinal cord has no influence on the urinary secretion. Longet (Traité de Physiologie, Paris, 1850, t. ii. B. p. 199) says:—"Many observations have demonstrated to me that the visceral organs, which receive their nerves from the sympathetic, *are far from being immediately paralyzed by the section of these nerves, and that their action is even maintained much longer than the duration of the experiments in which Ségalas had destroyed the spinal*

*marrow.** Therefore I think I am allowed to maintain that after such an injury, the nerves going to these organs, and more particularly to the kidneys, do nothing but spend little by little the *nervous force*, originally and principally derived from the spinal marrow, which is the chief, if not the exclusive centre of its production; thence the persistence of the renal secretion, as well as that of the movements of the heart, the intestinal canal, the uterine cornua, etc."

I could relate a great many experiments proving the incorrectness of Longet's theory, but a single one is sufficient. I have kept living, nearly *three months*, a young cat, on which the spinal cord had been *completely destroyed* from the eleventh or twelfth costal vertebra to its termination. This cat has lived all that time in apparently good health, and its *urine* has always been perfectly normal. It was acid, as is the case constantly in cats fed on meat, milk and bread. The bladder was palsied, but the sphincter vesicæ was generally contracted, so that every day I had to compress the abdomen and the bladder to empty this pouch. When I remained two days without doing that operation, the bladder contracted in consequence of the excitation produced on its muscular fibres by their distension.

This fact clearly proves that the urinary secretion is not under the dependence of the spinal cord.

According to Krimer, the medulla oblongata is the nervous centre upon which the urinary secretion depends. My experiments prove that this opinion is incorrect:—1st. After the destruction of the medulla oblongata in frogs, I have found that the secretion of urine remains as long as the animals have lived, *i. e.*, three or four months. 2d. On hybernating mammals, in winter time I have extirpated the medulla oblongata, after having emptied the bladder. These animals have lived a little more than a day, when I took the precaution of insufflating air in their lungs many times each hour. After their death the bladder was found full of urine apparently normal.

The medulla oblongata is not therefore a centre on which the urinary secretion depends.

4. The well known opinions of Segalas, W. Philip, Krimer,

* The italics are Longet's.

Chossat, Longet and others, about the influence of the spinal cord on the functions of organic life, are quite erroneous. I have found that birds are able to live for months after the destruction of the spinal cord, from the fifth costal vertebra to its termination. This fact proves not only that the functions of organic life may continue to exist in such a case, but that they appear to be executed then as in healthy birds; for, if the operation has been made on a young bird, it will afterwards grow very well.

I have succeeded in keeping alive, from the 8th of April until the 4th of July, a young cat, about which I have already published a note in this journal.* The palsied parts in this animal have grown in length proportionately as much as the sound parts. The growth has been such in the palsied limbs that they have acquired more than double the length they had at the time of the operation. The functions of organic life appeared to exist without any apparent disturbance. The nutritive reparation was so powerful, that the pieces of the vertebral column which had been cut off have been reproduced. This fact is important, because it shows that the reproduction of bone is possible in a palsied part.

The temperature of that cat was at the ordinary degree, (105° Fahr., in the rectum.) The secretion of the hair and nails took place as in healthy cats. I had previously seen on birds that their temperature remained normal after the destruction of a great part of the spinal cord. Besides, I have found in these birds that the secretion of quills and nails continued to take place.

As to the influence of the medulla oblongata on the functions of organic life, my experiments on cold-blooded vertebrata have proved to me, that these functions (except, of course, pulmonary respiration,) may continue to exist without any appearance of disturbance.

5. After the complete transverse section of the spinal cord in mammals or birds, I have found that the ulcerations which take place around the genital organs do not result directly from the absence of nervous action. One of the causes of these ulcerations is continued pressure, and another cause is the continual presence of altered urine and fæces.

* See Med. Exam., No. v. May, 1852, p. 321.

My opinion is well proved by the following experiments:—

1st. I have put, three or four times a day and for many days, a certain quantity of urine on the posterior part of the neck, in the neighborhood of the scapulæ, upon guinea-pigs. Before a week elapsed, the skin, at the place acted on by the urine, had lost its hair and epidermis. After a week more there was an ulceration in the skin, and ten or twelve days later the skin was destroyed, and there was an ulcer with a very bad aspect. This fact proves how powerful is the action of urine on the skin.

2d. On guinea-pigs, upon which the spinal cord was cut in the dorsal region, and on pigeons, upon which the spinal cord was destroyed from the fifth costal vertebra to its termination, I have found that no ulceration appeared when I took care to prevent any part of their bodies from being in a continued state of compression, and of washing them many times a day to remove the urine and fæces.

3d. In cases where an ulceration had been produced, I have succeeded in curing it by washing and preventing compression.

4th. I have found that in animals having the spinal cord cut across, every kind of wounds or burns were cured as quickly as in healthy animals.

Therefore the ulcerations which appear, in cases of paraplegia, do not exist directly in consequence of the palsy; they can be avoided and in many cases they can be cured.

These conclusions are perfectly true in animals having had an injury to the spinal cord for a shorter time than a year; but on guinea-pigs, upon which a lateral half of the spinal cord, had been cut for fourteen, fifteen, or eighteen months, near the tenth or eleventh costal vertebra, I have found an alteration of nutrition in the palsied parts. It was the right half of the spinal cord which had been cut, and in such a case, as I have discovered, the left side of the body behind the wounded part evidently loses a portion of its sensibility, and its temperature is also diminished. I have found, at the time designated, an ulceration coming in the part between the sacrum and the hip-joint. That ulceration has taken a tolerably great extension in surface but not in depth. It became as large as a half dollar. The part ulcerated has never been subjected to any kind of compression, neither to the action of urine and fæces.

Another kind of disturbance of nutrition occurred in these animals: they lost the hair of the leg, and of the other parts in which the sensibility was diminished.

6. It is known that erection is a frequent phenomenon in men after a fracture or a luxation of the vertebral column. It is known also, that in men hanged, erection and even ejaculation are not uncommon. Ségalas says he has seen these phenomena produced by the excitation of the spinal cord. Longet (loco cit., p. 201,) declares that he has not seen the excitation of the cord producing such effects. It is very easy to ascertain, on male guinea-pigs, that Ségalas is right.

1st. A transverse section of the spinal cord always produces an erection and an ejaculation.

2d. When one of these animals is asphyxiated, erection and ejaculation take place.

3d. If the spinal cord is galvanized, erection and ejaculation are produced.

These facts prove the influence of the spinal marrow on the seminal vesicles. They empty themselves slowly when the cord is galvanized.

In asphyxia, there are universal convulsions even in the muscles of organic life, as uterus, intestine, etc. These last organs are then put in contraction, and it is not astonishing, consequently, that the seminal vesicles become also contracted. The cause of these general contractions is the excitation of the spinal cord by venous blood, and very probably by a large amount of carbonic acid, as I will elsewhere try to demonstrate.

## IV.—ON THE REPARATIVE POWER OF THE NERVOUS SYSTEM.

I have recently published in this journal* the results of my researches on the reparative power of the spinal cord. From these researches I have drawn the following conclusions:—

1st. That the spinal marrow, even in adult mammalia, may be exposed to the action of the air without danger to the life of the animal.

2d. That wounds of the spinal marrow may be repaired.

* Med. Exam., No. vi., June, 1852, p. 379.

3d. That after a complete transverse section of the spinal cord, the functions of that organ may be entirely restored.

As to the nerves, the experiments of Fontana, Haighton, Tiedemann, Flourens, Steinrueck, and many others, have demonstrated the possibility of reunion of the two extremities of a cut nerve. But, in most, if not in all these experiments, the return of sensibility and of voluntary movements have not been complete. The following fact is, consequently, very important, because it proves the possibility of a complete reappearance of the lost faculties after the entire division of a nerve.*

A guinea-pig, on which the sciatic nerve had been cut across, exhibited indications of a return of sensibility a month after the operation. Two months afterwards the sensibility was increased, but was still much inferior to that of the sound limb. The muscles then were beginning to contract under the influence of the will. Six months after the section, the animal could evidently move its legs and toes voluntarily; the sensibility then was almost entirely recovered. At the end of about eleven months, the sensibility and all the voluntary movements were apparently alike in the two posterior limbs. The animal having been killed, it was found by my friend Dr. Lebert and myself that, except a slight union of muscular fibres with the nerve at the place where it had been divided, the restoration of the original condition was so complete that no indication of the division could be discovered, either with the naked eye or with the microscope. I had seen the usual swelling of the nerve at the point of reunion about the sixth month after the operation, but at the time of the last examination it had disappeared.

## V.—ON TURNING AND ROLLING AS PHENOMENA PRODUCED BY INJURIES OF THE NERVOUS SYSTEM.

Pourfour du Petit and Méhée de la Touche were the first experimenters who witnessed turning produced by an injury of the nervous centres. But the first valuable researches on this phenomenon were made by Magendie and Flourens.

The parts of the cerebro-spinal centre which can be injured without producing turning, are: the cerebral hemispheres, the

* See Gaz. Med. de Paris, 1849, t. iv. p. 880.

cerebellum, the corpora striata, the corpus callosum, the spinal marrow and the olfactive and optic nerves.* All the other parts of the cerebro-spinal centres are able to produce turning or rolling.

These circulatory or rotatory movements take place sometimes on the same side, and sometimes on the side of the body opposite to that of the encephalon which has been injured.

A puncture of one of the following parts produces turning or rolling on the injured side:

1st. The anterior extremity of the thalami optici, according to Schiff.

2d. The crura cerebri, according to Magendie.

3d. The bi, or quadri-geminal tubercles, according to Flourens.

4th. The pons varolii.

5th. The posterior part of the processus cerebelli ad pontem.

6th. The auditive nerve, according to my own experiments.

7th. The medulla oblongata at the point of insertion of the facial nerve, according to my experiments in common with Dr. Martin-Magron.

8th. The medulla oblongata outside of the anterior pyramids, according to Magendie.

9th. A great part of the posterior face of the medulla oblongata, according to my experiments.

The parts of the encephalon which produce turning or rolling on the opposite side, are:

1st. The posterior extremity of the thalami optici, according to Schiff.

2d. The crura cerebri, according to Lafargue.

3d. The anterior part of the processus cerebelli ad pontem.

4th. A small part of the medulla oblongata before the nib of the calamus scriptorius and behind the corpora olivaria, according to my experiments in common with Dr. Martin-Magron.

Some of these two series of parts ordinarily produce turning and the others rolling. But these two kinds of movements can be produced by the puncture of a single part of the encephalon. Rolling is nothing but the exaggeration of turning; thus, after

* I consider as a part of the nervous centres, the three nerves of the superior senses: the olfactive, the optic and the auditive.

a puncture of the medulla oblongata, the animal at first rolls, and after some instants, instead of rolling, it turns. If, when it is turning, a slight puncture is made anew, close to the first, then the animal rolls.

Before trying to explain turning, I will give an outline of some of its species.

1st. *Turning and Rolling caused by tearing the facial nerve.*

My friend Dr. Martin-Magron and myself have discovered that if the facial nerve of a rabbit or a guinea-pig be exposed at its exit from the stylo-mastoid foramen, and be then drawn away from the cranium, so as to tear it asunder near its origin, the animal begins in about five minutes to turn itself round and round, the movement being from left to right when the nerve has been thus torn on the left side, and from right to left when it has been torn on the right side. This rotation is generally preceded by convulsive movements of the eyes, of the jaws, and of the head upon the trunk: and the body is then bent (as in pleurosthotonos) towards the injured side, by the contraction of all the longitudinal muscles of that side, the power of which is such as to resist considerable force applied to extend them. The movement at first takes place in a small circle; but the circle generally enlarges more and more, until at last, after twenty or thirty minutes, the animal walks in a straight line. There is no paralysis of any muscles, save the facial. The effect is not produced, unless the nerve be torn close to its origin.

When the nerve on the other side also is torn, even after a long interval, instead of the tendency to turn to one side, there is, at first, a rolling of the body on its longitudinal axis, which takes place towards the side last operated on. After this has continued, however, for twenty minutes or more, the animal recovers its feet, and begins to *turn*, as after the first operation, but towards the other side. This movement soon ceases.

Dr. Martin-Magron and myself think that the cause of these phenomena does not exist in the facial nerve itself, but in the part of the medulla oblongata from which this nerve has originated.*

* See Gaz. Méd. de Paris, 1849, t. 4, p. 879.

2d. *Turning and Rolling produced by an injury to the Medulla Oblongata.*

M. Magendie (Précis Elém. de Physiol. Paris, 1836, t. 1, p. 414) says: "Having raised up the cerebellum, I make a section perpendicularly to the surface of the fourth ventricle and at three or four millimetres from the median line. If I cut on the right, the animal will turn on the right side; if I cut on the left, it will turn on the left side."

If we suppose a plane cutting the medulla oblongata transversely at the distance of nearly two lines before the nib of the calamus scriptorius, the posterior face of the medulla oblongata will be divided into two parts: one before that plane, which I will call superior, and the other behind, or inferior.

Now, every puncture on that superior part produces turning or rolling on the side which has been punctured. The slightest puncture on the processus cerebelli ad medullam oblongatam is able to produce a violent and very rapid rolling. As long as the animal lives after the operation, it rolls or it turns at each time it tries to walk.

When (as Dr. Martin-Magron and myself have discovered) a deep section is made on the inferior part of the posterior face of the medulla oblongata, before the nib of the calamus scriptorius, turning is produced on the side of the body opposite to the punctured side of the medulla. A rabbit, which has lived thirteen days after the operation, had still the circulatory movement a few hours before dying. Nevertheless, sometimes the animal could walk nearly straight during a few seconds.

3d. *Turning Produced by a Puncture or a Section of the Acoustic Nerve.*

Flourens has discovered that, after the section of the semicircular canals, turning sometimes takes place.

I have found all the facts he relates about this subject perfectly right. It was interesting to know if a puncture or the section of the auditive nerve would produce turning. As it was impossible to operate on that nerve in mammals, I have experimented on frogs. In these amphibia it is easy to find the nerve and to act upon it. I have found that after a puncture or a section on the trunk of the nerve, the animal begins instantly to turn. As

long as the frogs live, after a puncture of the acoustic nerve, they turn; but the circle of turning is much smaller a short time after the operation than afterwards. I have kept such frogs for months.

4th. *On a New Mode of Turning.*

I have found a mode of turning which has altogether some of the characters of turning and of rolling.

In the circulatory movement called turning (*mouvement de manége*), the body of the animal is bent on one of the lateral sides. It has the shape of an arch, and this arch is generally a part of the circumference described by the animal when turning. The smaller the radius of that arch, the smaller is the circle of turning.

In the new mode of turning I have found, the body of the animal is not bent, and when it walks it moves laterally, instead of going forwards. In turning it describes a circle, but the longitudinal axis of its body, instead of being then a part of the circumference, is a part of a radius, so that its head is at the circumference, and its tail towards the centre of the described circle.

That mode of turning has been executed by animals on which the quadrigeminal tubercles and the pons varolii, on one side, had been punctured by a pin. One of the eyes was convulsed; the other was in its normal condition. The convulsed eye was the right one, and the tubercles punctured were those of the left side.

5th. *On the Causes of Turning and Rolling.*

I have not room enough to show that the theories of Magendie, Flourens, Henle, Lafargue and Schiff are contradicted by a great many facts. I will only present the following remarks:

1st. As the slightest puncture of certain parts of the encephalon is sufficient to produce turning or rolling, it is evident that those rotating movements do not exist in consequence of an hemiplegia, as Lafargue, Longet and Schiff believe they do. Another reason is that every degree of hemiplegia exist in man without being accompained by turning or rolling. Besides, these phenomena have been observed in persons who had no paralysis at all.

2d. The theories of Magendie and Flourens are also opposed, by the fact that a slight puncture is sufficient to produce turning or rolling.

3d. As to the theory of Henle, which is based upon the existence of convulsions in the eye, producing a kind of vertigo, it has against it the facts that, on one side, convulsions may exist in the eyes without any other disorder in the movements; and, on the other side, sometimes turning or rolling exist without any convulsion in the eyes.*

Nevertheless, I think that, in many cases, the vertigo consequent on convulsions of the eyes is one element of the cause of turning. I think also that, in certain cases, paralysis of some parts of the body may facilitate the rotatory movements. But their great cause, I think, is the existence of a convulsive contraction in some of the muscles, on one side of the body. These convulsive contractions are to be found in every case of circulatory or rotatory movement. As to the cause of these contractions, it exists in the irritation produced in certain parts of the encephalon.

## VI.—ON A MEANS OF MEASURING DEGREES OF ANÆSTHESIA AND HYPERÆSTHESIA.

The curious facts discovered by E. H. Weber, on tactile sensibility, are well known. He found that if the two blunted points of a pair of compasses are applied simultaneously on the skin, there is, according to certain circumstances, either the sensation of one or of two points. When the points are both inside of certain boundaries, they are felt as one only; when they are outside of these boundaries, both are felt. These boundaries vary exceedingly in different parts of the skin, but for a given part the differences between men are not extremely considerable. I have made use of the compasses for measuring the degrees of tactile sensibility in diseases. In a case of considerable anæsthesia of the lower extremities, the patient only felt a single impression on one leg, although the

* See a very remarkable case observed by my friend Dr. Lebret, in *Comptes rendus* et Memoires de la *Soc. de Biologie* annee 1850. Paris, 1851. t. ii. p. 7.

points of the compasses were ten, fifteen, or even twenty centimetres apart; whilst on the other leg he could distinguish them at a distance of twelve centimetres. The normal limit is generally, for that limb, from three to five centimetres. In another case where anæsthesia was slighter, the limit of the discriminating power was at from nine to sixteen centimetres. In two other cases, in which the diminution of sensibility had not been found by the other means of diagnosis, the compass indicated a very slight and beginning anæsthesia. The limit was at from six to seven centimetres.

These facts, and many others, have demonstrated to me that by the help of the compass, a physician can ascertain: 1st. Whether there is a slight anæsthesia or no. 2d. What is the degree of anæsthesia. 3d. What changes occur every day in the amount of anæsthesia.

The same is true for the cases of hyperæsthesia. In a case of paraplegia of the motor power, the patient felt the two points of the compasses, on his feet, even at the distance of five millimetres, whilst a healthy person feels the two points only when they are at a greater distance than twenty-five millimetres.

I shall add, that for succeeding in such experiments the two points must be blunted and applied simultaneously.*

(To be continued.)

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*Observations on Cholera in Military Practice.* By W. H. Tingley, M. D., late an officer of the medical staff, U. S. Army, Member of the Academy of Natural Sciences, etc.

Of the many diseases that have claimed the attention of the medical profession, few have found so prominent a place as Epidemic Cholera. It has existed under circumstances, to all human knowledge, the most dissimilar, and exhibited an irregularity of developement and progress that has alike defied the skill of medicine, and the researches of pathology. Many hypotheses have been constructed to explain its various phenomena, but few have approximated probability, fewer still have had a semblance of truth.

* See Gaz. Med. de Paris, 1849, t. iv. p. 1012.

There are causes operating which are often coincident, yet do not produce disease; these obtain throughout the imponderable world, effecting daily and hourly changes in the vital forces; they are too subtle to be appreciated—too mysterious for human view, and into which no eye shall see, and of which no tongue shall speak. Yet if we cannot grasp the substance we may seize the shadow, and learn in time by patient observation what at first seemed insurmountable. Reason may prove fallacious, but well digested facts are 'built upon a rock.'

If the observations made by the writer, under trying and peculiar circumstances, can add aught to the already accumulated stock, he will rest satisfied that he has not labored in vain.

The command to which I was attached, consisting of three hundred and twenty men, sailed from Fort Wood, New York Harbor, April 2d, 1851, in a well and comfortably fitted transport. We arrived at New Orleans Barracks after a tedious voyage of twenty eight days, without any important sickness. From this place we embarked in a steamer for Jefferson Barracks, on the Mississippi, ten miles below Saint Louis, where we arrived in eight days, in good health. Thence we sailed in a small, dirty, and crowded steamer for Fort Leavenworth in the Indian Territory, on the Missouri, five hundred miles above its confluence with the Mississippi. On board the steamer there were many returning Californians, whose total disregard for personal cleanliness was remarkable. Four days after our departure the weather which had been mild and pleasant, became sultry, wet and warm. At this period diarrhœa appeared among the men, and two days afterwards three were attacked with unequivocal malignant cholera; on the following day two more men were taken down; of all these, two died, one in five, and the other in eight hours; these two men were the most intemperate and insurbordinate in the command. On our arrival at Fort Leavenworth the subsequent day, the command was marched to camp 'Burgwin,' three miles west of the Fort, where two hundred and fifty men had arrived, a fortnight before, from Newport Barracks, Kentucky. They had passed down the Ohio and up the Mississippi and Missouri rivers, but had no sickness among them, nor had they any at the time of our arrival, excepting the ordinary camp diarrhœa

which attacks most soldiers when first taking the field. On the day after our arrival the cholera broke out among these men, and from this time it became rife. The site of the camp was in the basin of an undulating prairie, surrounded by alternately receding acclivities, and deeply furrowed water courses, through which the rain streamed during the heavy showers, which now fell almost hourly, into the plain below, forming pools of water in and around the company's tents and drill ground. The soil is a rich loam, based on a substratum of argillacious mould, and limestone. Several species of Nymphaceæ grow in the ponds and the Lycopodaceæ on the hill sides. The principal trees are *Juglans nigra*, *Carya olivæformis*, *Cayra alba*, *Acer saccharinum*, *Plantanus accidentalis*, *Cerasus virginianæ*, *Morus rubra*, *Quercus alba*, and *Populus canadensis*. A luxuriant growth of grass covers the lowlands, and the Silphium lancinatum (Pilot weed) abounds. The prevailing winds were from south and southeast. The average temperature, for one week was (in round numbers) 72° Fahr. during the day, and 56° during the night. The greatest daily extremes were 83° and 58°. The greatest nightly extremes, 56° and 50°. The weekly average of Hygrometric observations, showed the 'dew point' at 66°, its greatest extremes 70° and 63°. The hygrometic observations were made at daylight, and 3 P. M., (according to Kœmptz, the relative humidity of the atmosphere is greatest at daylight.) The weekly average of the barometer was 29.231, its greatest extremes 29.854 and 28.105.

The tension of the atmospheric electricity was considerably diminished; this condition is nearly always coincident with a high 'dew point.' The electricity of the atmosphere, like the barometer, undergoes several *horary* variations. According to Becquerel, its least intensity is at daylight, and 3 P. M. At these respective hours the majority of cholera cases were reported, more, however, at the former than the latter hour. The sound of the reveille drum frequently brought the hospital steward to my tent to say, 'another man just taken down.' The disease began to decline as soon as the weather became settled—when the relative humidity of the air was diminished, and when we had crossed the valley of the Kansas river, and began the ascent to the upland 'plains.'

According to Cavallo, the atmospheric electricity is weakest in hot weather, and previous to a shower of rain. The observations of Mr. Howard have proved—first, that the positive electricity common to fair weather disappears and yields to a negative state before rain. Secondly, that the rain that falls first after a depression of the barometer is negative. To these, I can add my own observations. The night on which the disease was most rife, was the most terrific I have ever witnessed. The rain fell in torrents, swelling the stream near our camp, which we had crossed nearly dry shod a few hours previous, to its highest banks. The fitful blasts howled through the thick foliage of the forests trees, overturning in its resistless course many tents, and exposing their inmates to its merciless rage. The lightning played with incessant glare, and the thunder roaring far and near, mingled mournfully harsh with the shrieks and agonising cries of the dying. On that night the spirit of pestilence and the spirit of the storm stalked forth arm in arm.

Dr. Crawford,(Observations on the Asiatic Cholera in St. Petersburg,) says: "During the latter end of May, and the whole of June, a remarkable change took place in the weather. There were almost constant high winds, shifting frequently and suddenly round to every point of the compass, and often accompanied by torrents of rain, and sometimes thunder. This disturbed state of the atmosphere was indicated by sudden fallings and risings of the barometer, sometimes to the extent of between one and two inches. The changes of the temperature were equally frequent and rapid, the heat being for several days very great, as high as 84° to 90° Fahr., and the air exceedingly sultry and oppressive, and a damp, relaxing south wind; and then suddenly on a change of wind, and sometimes on the occurrence of a thunder storm, this oppressive heat would be succeeded by great cold, the thermometer falling as much as 50° in a few hours, so that it was in June several times below the freezing point. Another peculiarity in the condition of the air, was the disturbed state of its electricity. This was clearly demonstrated by the fact, that the electric machines could not be charged, and to a great extent lost their power, which generally happens whenever the atmosphere is damp and unsettled." Muller takes a somewhat opposite view. (*Einige Bemerkungen über die Asia-*

*tische Cholera.*) He says, "Throughout the whole duration of the epidemic, the air was oppressive, changeable, and heavy. Thunder storms occurred often, but had no influence on the number of attacks or recoveries. Rain fell almost daily, the heavens were gloomy, the evenings foggy, and the sun was seldom visible." Dr. Muller does not say whether he kept a daily record of the state of the atmospheric electricity. When in China, several years since, I was informed by an officer of the British army, that before and during the malignant fever which ravaged the island of Hong Kong the year previous to my visit, 1843, the weather was variable, alternately hot and cold with heavy rains, and that there was no 'electricity in the air.'

I have been informed by my friend Lieutenant Sturgis, 1st. U. S. Dragoons, that a detachment of men under his command which started from New York in May, 1850, for Fort Leavenworth, via the Lakes, had no sickness until they arrived at Lasalle, Illinois, after they had been for several days crowded in a small and dirty canal boat. On their arrival at the aforesaid place, the cholera broke out among them and continued with the command, until they had crossed the valley of the Kansas river. Although there was no meteorological register kept, Lieut. S. says, 'the weather was hot and rainy during the day, and cold at night.'

The principal conditions under which the electricity of the air is developed, require but a passing notice. They are friction of the air against the earth. Change of state in fluids—evaporation; it is evolved during the germination of plants, and the breaking of crystals.

My experience strongly inclines me to seek for the causes of cholera, and many, if not all, diseases of a pestilential nature, in the irregularities and diminished tension of the atmospheric electricity. The agency of these changes in producing a predisposition to disease may be considered in a three fold relation. First, as acting, *per se*, separate and apart from all correlative conditions. Second, as influencing the condition of the efficient causes, whether vegetable, animal, geological, or fungous in their nature, and predisposing the body to the operation of one or more of these. Third, as acting in combination with one more of the above. In the barren and uncertain state of statistical know-

ledge of the effects of physical agents on the animal constitution, the difficulty of selecting one of these conditions above the rest will be apparent. The first proposition may with propriety be rejected, because the laws of nature are immutable, and when determined we have a *point depart* for judging of analogous states.

The laws which regulate our sphere, and the thousands of worlds surrounding it, have been in operation since 'time was.'

'Such as creation's dawn beheld
Behold thee now.'

One drop of water less in the world than when it was created, would cause an eccentricity in its motion, whose consequences might prove a 'wreck of matter.'

The compass that guides the mariner, has its own fixed principles. Light has its own laws. If these were changing, excepting according to known and regular progression, the interests of commerce, of navigation, and of science would be forever destroyed. The barometer in its mutations is faithful and constant, predicting to a certainty the coming tempest, and enabling the mariner to protect his ship and his life against the 'strife of elemental war.' Why should not electricity, in its relation to organized matter, have its fixed laws likewise? No one can doubt that the identical state of the atmospheric electricity which at one time produces pestilence, at another time may be compatible with the most vigorous health. The choice therefore lies, necessarily, between the second and third propositions. Here the difficulty is increased tenfold. I shall, however, select the second, because under the circumstances of the first appearance of the disease among our men, there was sufficient cause for the developement of a pestilence that had for several days foreshadowed its invasion. If we assume that the active cause was of a vegetable character, we certainly had enough decaying vegetable matter and filth to prove a *foyer* of disease. If it is admitted that it is animal in its nature, there is a ready explanation in the crowding together of so many men in a narrow and imperfectly ventilated space, and whose personal cleanliness was totally disregarded. If the fungous theory is viewed as causing a proclivity to pestilential disease, we might have found conditions amply efficient. Furthermore, opposed to the last proposition, which

presupposes immediate action under concurrent conditions of air and earth, is the fact that the men complained of cramps in the upper and lower extremities, of lassitude, debility and vertigo, which is sufficient to prove the action of this subtle agent on the human frame. Dr. Holland, (Medical Notes) says: "One of the best tests of the actual operation of the atmospheric electricity on the body is, as I think, that mixed sensation of heat and cold which most persons must recollect at some time to have felt—or rather the consciousness of sensations which cannot clearly be defined to be either. Concurrently with such a state of atmosphere which the thermometer does not in any way interpret to us, there generally occurs more or less of the lassitude before described, the muscles are readily fatigued, some degree of headache is often felt, and other vague uneasiness of the bodily feelings, varying much in different habits, and doubtless influenced by the condition of the health at the time."

I believe that the subtle agent (electricity) primarily affects the nervous system through the medium of the lungs, and that the blood disorder is a consequence of irregular innervation. We see this in the diminished power of calorification, and the depressed and disordered circulation. It is under such conditions that efficient causes may require a force and intensity that under a positively electrified state of atmosphere they do not possess. The *prodromes* were cramps, lassitude, debility and vertigo; the biliary secretion was suppressed, and the portal circulation congested, as evidenced in the clay colored stools, discharges of blood from hemorrhoidal tumors, bitter pasty taste in the mouth, as if the patient had 'eaten a bad egg,' or 'drunk bilge water,' alternately constipation and diarrhœa. If we admit that the impression of the morbific agent is made on the nervous system, and, following this, on the blood, we can readily account for the hæmatological changes and the irregular transmission of nervous power, so well marked in cholera.

Those who have witnessed the enormous discharges from the intestinal mucous membrane, and the suddenness with which the cholera often makes its invasion, will not doubt a two fold operation of the efficient cause or causes. To those who doubt it, and view the nervous and muscular symptoms as sequacions to primary action in the blood, I would only ask, if these should not

show marked effects only after changes noticed to the blood—should not blood drawn from a vein during the *Prodromes*, show some physical or chemical change. The former I have never observed; the latter I had not the means of observing.

Prevost found that an electric spark passed through a drop of blood, caused the particles it contained to partially separate from their elementary globules.

The speedy course of the disease is sometimes remarkable. Twice I have seen cavalry soldiers, apparently in good health, fall from their horses and die within an hour. Two men who died thus suddenly, I know were and had been in good health for ten or twelve days. With the exception of hydrocyanic acid there is no agent, save electricity, that can so entirely disorganize the blood, and this agent must first produce its effect on the great nervous centres.

The question of the propagation of cholera by contagion has claimed no inconsiderable attention. Many singular facts have been adduced by the contagionists and non-contagionists. Surgeon Thomas Lawson, now Surgeon General, in his official report, 1832, says: "No case of the disease manifested itself at New Orleans until the arrival in port of the steamer 'Constitution,' which had several cases on board—a number of the passengers having already fallen victims to the disease; so fearfully rapid was the pestilence in its progress, than in less than forty-eight hours it reached the lowest plantation on the Mississippi, desolating almost every spot inhabited by man. Like a skilful general, it seems to have advanced upon the capital, leaving the minor posts on the line of march untouched. Whatever may have been the cause of the disease, it was unknown among us until the steamer Constitution arrived in port."

There had been no cholera in any of the towns on the Mississippi river, and it was not until several days after our arrival at Fort Leavenworth, that it appeared in Independence, Missouri. Nor had there been any cases at the Fort. For two months the disease lingered about the river towns, and nearly every steamer passing up and down the river had more or less of the pestilence on board. On our march we overtook a train of Santa Fe traders who, up to this time, had been in excellent health; after this the disease broke out among them, but not with great malignity.

Many of the hospital orderlies were attacked while attending the sick. At a Pottawattomie Indian settlement near which we passed, the disease raged for a week with fearful mortality. Assistant Surgeon Kennedy and myself were attacked nearly at the same time, without any premonition, while attending to our professional duties. He died in six hours; I suffered a long and tedious convalescence. Company B., First U. S. Dragoons, passed over our route a fortnight after us, and had the same inclement weather, yet not one man was reported sick; but they were old and acclimated soldiers, well used to the field. From these and similar facts in the practice of other medical officers, I was induced to believe that cholera is generally *contagious*, but that under favorable circumstances it may be *non-contagious*.

In treating this disease two methods were employed—the sedative, and the stimulant and alterative. The first consisting of opium and acetate of lead, was adopted by my colleague, Assistant Surgeon Kennedy. The last method was followed by myself. The combination was calomel in large proportions, (I have found this drug in large doses, xx. grs., relieve the nausea and irritability of stomach), camphor, capsicum and quinine, and small quantities of acetate of morphia. In a few cases, I gave calomel combined with rhubarb and ipecacuanha; in civil practice this treatment may be beneficial in some cases, but soldiers and sailors require more heroic medication. Those cases which terminated fatally, treated by the first method, usually died during the stage of collapse; those who died after the treatment by the second method died either during the stage of reaction, or from some intercurrent or consecutive disease, as apoplexy, typhoid fever, pneumonia, or gastro-enteritis. When I saw a patient before the *algide* state commenced, the comparative ratio of deaths was as 42 to 54. Those who have not witnessed the destitute and comfortless condition of troops on a march, cannot readily understand how mortality can be so great during an epidemic. Within a few days, I have heard from a detachment of troops which left in May for Santa Fe. They had had the cholera, and the mortality was one out of every eight men composing the command. I believe this treatment would be more successful in private practice, where such valuable adjuvants as warm and vapor baths can be obtained, to say nothing

of the advantage of houses over tents for invalids. After a trial of several methods of treatment, I am satisfied with the superiority of the stimulant and alterative treatment above detailed. From what I have seen of the opium treatment, I am not disposed to advocate it. When it is beneficial it is in the very early stages of the disease, when there has been precursory diarrhœa, and before the characteristic rice water discharges appear. I have seen the error of 'locking up the bowels,' and retaining the morbid secretions of the intestinal canal in contact with its mucous membrane. Moreover, I have seen patients *overdrugged* more than once by not very large doses of this medicine. The opium treatment is emphatically empirical—it combats symptoms, not the disease. When the nature of the disease is changed by calomel, quinine, &c., or by a "crisis '—as soon as the alvine evacuations become fœcal and bilious, the mineral astringents (acetate of lead I prefer) exert a salutary and tonic influence on the gastro-intestinal membrane. I have tried several of the vegetable astringents, but have no faith in them.

In a few cases I bled, not empirically, but to relieve cerebral congestion—this was never urgent save in the reactive stage, when the injected conjunctiva, pain across the temples, heaviness of intellect, and partial coma, indicated the condition of the cerebral circulation. Spasmodic action of the muscles, and cramp were relieved by sinapisms, and towels wrung out of hot vinegar. I have tried chloroform, and have the fullest reasons for being dissatisfied with it. Sometimes cholera assumes anomalous forms. An officer of the staff was attacked and went through the disease without having more than five or six evacuations per *anum*; he however, ejected per *orem*, matter in all respects resembling 'black vomit,' and was so near death that he had involuntary alvine discharges, a state usually considered beyond hope. He suffered severely for several weeks with gastralgia, cardialgia, and a paralytic condition of the lower portion of the colon. I prescribed friction with dry mustard to the abdomen, diluted tincture of cantharides to the spinal column, small doses of brandy and the alcoholic extract of nux vomica, until urethral irritation was induced; under this treatment he gradually recovered.

I made but few necroscopic examinations, and those, made after the fatigues of a march, were necessarily hasty. In those

who died during the stage of collapse, the mucous membrane of the stomach and intestinal canal was pale, soft, and easily detached from the subjacent tissue. The liver was anæmic, and the gall bladder filled with thick bile. In those who died during the stage of reaction, there were traces of *diptheritic* inflammation, enlargement of the mucous follicles, and engorgment of the mesenteric veins. In one case there was found a state of red hepatization of the lungs; this condition was suspected during life. My attention was first directed to it by the comatose condition of the patient, which evidently did not arise from the disease, (cholera). The engorged upper lobes pressed upon and obstructed the blood in the superior vena cava.

There has not been much written respecting the *sequelæ* of cholera; some have considered abdominal typhus as one; others a well developed *gastro-enteritis* as another. My own observations do not coincide with either of these views. I have never seen the tenderness about the right iliac region which marks the first, nor the pain and tenderness about the umbilicus, so characteristic of the other; but I have seen an accelerated pulse, dry, harsh skin, furred tongue, morbidly increased appetite and diarrhœa, which are prominent symptoms of a low form of intestinal inflammation; and this condition I consider the true consecutive disease. In a few cases the affection of the duodenum extends to the biliary ducts, and to the stomach, but the gastric disorder is strictly functional, and consists in disordered secretion of the gastri follicles, and atony of the muscular coat. The disordered stomach is soon relieved, but the intestinal disease is present even after many years. The brain is more or less affected—dimness of vision, vertigo, and mental inaptitude show the disordered innervation of this "great central power."

I have used with benefit, in this condition, blisters over the abdomen, mercury, ipecac, and taraxacum combined, with enemeta of tepid water twice daily. Where it can be obtained, the warm shower bath is a valuable adjuvant. When all symptoms of inflammatory action have subsided, and the bowels are left in an atonic condition with large accumulation of gas within them, there is no medicine that can compare with the nux vomica. I prefer the alcoholic extract to any other preparation; under its use I have seen the most distressing symptoms speedily relieved.

*Mortality of Philadelphia, for April, May and June*, 1852, *arranged from the Record kept at the Health Office. With remarks on the new "Registration Law."* By WILSON JEWELL, M. D.

The second quarter of the present year, commenced on the 28th day of March, and terminated with the 3d of July, ult., embracing a period of 14 weeks and 1 day, or 99 days. According to the returns found at the Health Office, the number of deaths during the quarter, from all causes, amounted to 2634, showing a falling off of 151, or 6 per cent., from those of the first quarter of the year.

TABLE No. 1 Exhibits a classification of the various causes of death during the quarter, together with an enumeration of the sexes, as well as the number of deaths for each month separately.

Comparing this table, with the same one for the first quarter of the year, as published in the June No. of this work, it will be found that the principal falling off has taken place among the deaths from diseases of the organs of respiration, amounting to 164, or 22 per cent.

TABLE No. 2 Furnishes an accurate account of the names of the diseases found on the Register at the Health Office, being a faithful transcript from the certificates of the physicians. This nomenclature, which at the best is an imperfect one, we have not disturbed, preferring to allow each physician to speak for himself, rather than alter his phraseology, in order to show, how difficult it is to compile a statistical abstract, which would approach towards accuracy, in making comparisons of the prevalence of different diseases at distinct periods of the year, while this want of uniformity in attaching names to diseases shall continue to be observed.

This table also includes the number of deaths from the various causes assigned therefore, at fifteen distinct periods of life.

The deaths from Consumption of the Lungs as usual, occupy a large space in the table, amounting to 324; 175 of which took place between the ages of 20 and 24. The deaths from Consumption for the past six months have exceeded those for the same period of 1851, by 221—to wit:

| | 1851. | 1852. | |
|---|---|---|---|
| 1st and 2d quarter, | 461 | 682 | Excess of 1852, 221. |

Of the deaths recorded under the head of diseases of the Nervous System, amounting to 469, 315 took place in children under five years of age. The deaths from Convulsions alone, amounted to 131; 68, or more than half, occurring in children under one year of age.

The deaths from Scarlet Fever amounting to 98, have fallen off since the last quarter, about 35 per cent.

The mortality from Typhus and Typhoid Fevers has more than doubled itself since our last report. During the first quarter, January, February, and March, the deaths from these fevers numbered 48. The quarter just ended, shows 91 deaths, being an increase of 43.

Small Pox and Varioloid still continue to prevail. The deaths for this quarter number 137, two-thirds of which were under ten years of age, a striking evidence of the want of attention to vaccination among certain classes of our population. The deaths from Small Pox for the last six months, have amounted to 402; equal to two deaths per day.

By a reference to the tables in the June No. of the Examiner, it will be found that the deaths from Dysentery have doubled themselves. During the first quarter of the year, there were 34; while the second gives 75.

The deaths from Cholera Infantum have also increased during the present quarter. 44 cases of deaths are recorded, 40 of which were under two years of age.

TABLE No. 3 Presents the aggregate number of deaths during the second quarter, from all causes, for fifteen distinct periods of life. By this analysis, it will be seen that nearly half the deaths that have been registered, occurred in children under five years of age. Exclusive of the "Still Born," 551, or nearly one fourth were under one year of age.

Beyond the fifth year of life, the highest number of deaths took place between the ages of 30 and 40.

The deaths from "Still Born," 127; "External Causes," 72; "Old Age," 61; "Debility," 71, and "Unknown," 81, in all 412, will leave 2222 deaths from known diseases, which is equal to 22½ deaths per day, during the quarter.

TABLE NO. 1

*Deaths for the second quarter of* 1852, *classified.*

| | April | May. | June | Male | Fem. | Total. |
|---|---|---|---|---|---|---|
| 1. *Endemic and Contagious Diseases.* Zymotic or Epidemic, | 235 | 175 | 213 | 309 | 314 | 623 |
| 2. *Uncertain or general seat.* Sporadic Diseases | 108 | 87 | 120 | 173 | 142 | 315 |
| 3. Of the Nervous System, | 180 | 132 | 157 | 269 | 200 | 469 |
| 4. Organs of Respiration, | 248 | 190 | 146 | 314 | 270 | 584 |
| 5. " Circulation, | 28 | 16 | 26 | 34 | 36 | 70 |
| 6. Of the Digestive Organs, | 59 | 58 | 57 | 77 | 97 | 174 |
| 7. " Urinary " | 4 | 3 | 7 | 11 | 3 | 14 |
| 8. " Organs of Generation, | 14 | 7 | 3 | | 24 | 24 |
| 9. " Organs of Locomotion, | 3 | 6 | 5 | 7 | 7 | 14 |
| 10. " Integumentary System, | | 5 | 1 | 4 | 2 | 6 |
| 11. Old Age, | 25 | 18 | 18 | 20 | 41 | 61 |
| 12. Of External causes, | 19 | 21 | 32 | 55 | 17 | 72 |
| Still Born, | 53 | 26 | 48 | 70 | 57 | 127 |
| Unknown, | 23 | 25 | 33 | 39 | 42 | 81 |
| | 999 | 769 | 866 | 1382 | 1252 | 2634 |

TABLE No 2.

1. *Endemic and Contagious Diseases.—Zymotic or Epidemic.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aphthæ | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Cholera Infantum | 24 | 20 | 30 | 10 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 44 |
| " Morbus | 5 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | | | 6 |
| Croup | 23 | 25 | 5 | 14 | 24 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 48 |
| Diarrhœa | 14 | 11 | 13 | 2 | 0 | 1 | 0 | 1 | 1 | 0 | 2 | 3 | 1 | 0 | 1 | | | 25 |
| Dysentery | 39 | 36 | 10 | 15 | 16 | 3 | 1 | 0 | 6 | 4 | 6 | 5 | 5 | 3 | 1 | | | 75 |
| Erysipelas | 8 | 16 | 7 | 1 | 2 | 0 | 0 | 0 | 0 | 3 | 4 | 3 | 2 | 2 | 0 | | | 24 |
| Fever | 5 | 4 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | | | 9 |
| " Congestive | 3 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 3 |
| " Hectic | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | 2 |
| " Inflammatory | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| " Irritative | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| " Intermittent | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| " Remittent | 5 | 5 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | | | 10 |
| " Scarlet | 40 | 58 | 7 | 17 | 41 | 31 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | 98 |
| " Synocha | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| " Typhus | 36 | 21 | 1 | 1 | 0 | 1 | 2 | 2 | 15 | 10 | 13 | 8 | 4 | 0 | 0 | | | 57 |
| " Typhoid | 18 | 16 | 0 | 0 | 0 | 3 | 0 | 2 | 9 | 11 | 3 | 1 | 5 | 0 | 0 | | | 34 |
| Hooping Cough | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 2 |
| Measles | 16 | 27 | 11 | 19 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 43 |
| Small Pox | 67 | 67 | 22 | 17 | 36 | 15 | 4 | 4 | 23 | 10 | 1 | 1 | 0 | 1 | 0 | | | 134 |
| Syphilis | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Varioloid | 2 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 3 |
| | 309 | 314 | 114 | 98 | 141 | 67 | 8 | 10 | 55 | 46 | 31 | 23 | 22 | 6 | 2 | 0 | 0 | 623 |

*2. Uncertain or General Seat.—Sporadic Diseases.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abscess | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | | | 4 |
| " of Neck | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | 1 |
| " of Thigh | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Amputation of Leg | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | 1 |
| Cancer | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | | | 5 |
| Cachexia | 6 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | | | 6 |
| Congestion | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Cyanosis | 3 | 7 | 8 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 10 |
| Cancer of Breast | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | | | 3 |
| Debility | 36 | 35 | 33 | 2 | 2 | 1 | 0 | 2 | 1 | 6 | 9 | 8 | 5 | 1 | 1 | | | 71 |
| Disease of Throat | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | 1 |
| Dropsy | 20 | 16 | 0 | 1 | 5 | 4 | 2 | 2 | 0 | 4 | 2 | 7 | 3 | 5 | 1 | | | 36 |
| Effusion | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Gangrene | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | | | 3 |
| " of Mouth | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Hemorrhage | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | 3 |
| " from Umbilicus | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 2 |
| Inanition | 14 | 11 | 23 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | 25 |
| Inflammation | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | 2 |
| " Glandular | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 2 |
| Injury of Perineum | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | 1 |
| Malformation | 5 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 6 |
| " of Rectum | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Marasmus | 45 | 41 | 48 | 17 | 9 | 0 | 1 | 2 | 2 | 0 | 0 | 2 | 2 | 2 | 1 | | | 86 |
| Melœna | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | | | 2 |
| Mortification | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | | | 2 |
| Scirrhus of Breast | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | 1 |
| Scrofula | 10 | 12 | 5 | 3 | 6 | 1 | 1 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | | | 22 |
| Tabes Mesenterica | 11 | 2 | 5 | 5 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | 13 |
| Tumour of Neck | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | 1 |
| Ulceration | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| | 173 | 142 | 136 | 32 | 30 | 8 | 4 | 10 | 6 | 17 | 20 | 25 | 13 | 9 | 5 | 0 | 0 | 315 |

### 3. *Of the Nervous System.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Œdema of Brain | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Atrophy " | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Apoplexy | 12 | 11 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 6 | 5 | 2 | 6 | 0 | 1 | 1 | | 23 |
| Asthma Thymic | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Cerebral Fever | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Concussion of Brain | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | 1 |
| Congestion " | 25 | 20 | 8 | 7 | 4 | 3 | 0 | 1 | 7 | 5 | 6 | 0 | 1 | 2 | 1 | | | 45 |
| Compression " | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Coma | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | | 1 |
| Convulsions | 71 | 60 | 68 | 29 | 21 | 5 | 2 | 1 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | | | 131 |
| " Puerperal | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | | | 5 |
| Cramp | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | 3 |
| Coup de Soliel | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | | | 3 |
| Disease of Brain | 15 | 9 | 11 | 5 | 1 | 3 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | | | 24 |
| Dropsy " | 42 | 40 | 32 | 21 | 21 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | 82 |
| Epilepsy | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | | | 8 |
| Effusion of Brain | 16 | 12 | 3 | 13 | 4 | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 0 | 0 | | | 28 |
| Inflammation of Brain | 47 | 25 | 23 | 15 | 11 | 8 | 1 | 3 | 4 | 1 | 0 | 2 | 0 | 1 | 0 | | | 72 |
| Injury " | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Insanity | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | 1 |
| Mania | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | 1 |
| Meningitis | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Mania a Potu | 13 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 3 | 4 | 1 | 1 | 0 | | | 15 |
| Neurosis | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | 1 |
| Palsy | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 3 | 3 | 1 | | | 12 |
| Spasm of Glottis | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Softening of Brain | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Tetanus | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| Trismus | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 2 |
| Tuberculosis Cerebri | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 1 |
| | 269 | 200 | 151 | 94 | 66 | 23 | 8 | 10 | 21 | 29 | 26 | 15 | 14 | 8 | 3 | 1 | 0 | 469 |

### 4. *Organs of Respiration.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abscess of Lungs | | 2 | | | | | | | | | | 1 | | 1 | | | | 2 |
| Asthma | 2 | 1 | | 1 | | | | | | | 1 | | | | 1 | | | 3 |
| Congestion of Lungs | 8 | 5 | 7 | 2 | 1 | 1 | 1 | | | 1 | | | | | | | | 13 |
| Consumption " | 165 | 159 | 7 | 4 | 7 | 4 | 11 | 25 | 84 | 91 | 45 | 32 | 9 | 3 | 1 | 1 | | 324 |
| Coryza | 1 | | 1 | | | | | | | | | | | | | | | 1 |
| Disease of Lungs | 3 | 3 | 1 | | | | 1 | | | | 1 | 1 | 1 | | 1 | | | 6 |
| " Chest | 1 | | | | | | | | | 1 | | | | | | | | 1 |
| Dropsy of Chest | 11 | 11 | 1 | 2 | 5 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | | | 22 |
| Effusion " | 3 | | | | | | | | | | 1 | 2 | | | | | | 3 |
| " Lungs | 1 | | 1 | | | | | | | | | | | | | | | 1 |
| Gangrene " | 1 | | | | | | | 1 | | | | | | | | | | 1 |
| Hemorrhage " | 3 | 2 | | | | | | 1 | | | 3 | | 1 | | | | | 5 |
| Inflammation " | 70 | 52 | 29 | 22 | 18 | | 2 | | 11 | 8 | 10 | 4 | 14 | 2 | 2 | | | 122 |
| " Bronchia | 34 | 24 | 20 | 14 | 7 | 4 | | | 3 | 1 | 2 | | 3 | 2 | 2 | | | 58 |
| " Chest | | 1 | 1 | | | | | | | | | | | | | | | 1 |
| " Larynx | 3 | 6 | 1 | 3 | 1 | | 1 | | | 1 | | 1 | 1 | | | | | 9 |
| " Pleura | 2 | 1 | | | | | | 1 | 2 | | | | | | | | | 3 |
| " Throat | 2 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | 3 |
| " Tonsils | 1 | | | | 1 | | | | | | | | | | | | | 1 |
| Palsy of Lungs | 1 | | | | | | | | | | 1 | | | | | | | 1 |
| Tuberculosis | 2 | 2 | 1 | 1 | | | 1 | | | 1 | | | | | | | | 4 |

5. *Organs of Circulation.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anæmia | 2 | 2 | 2 | | | | | | | 1 | | 1 | | | | | | 4 |
| Angina Pectoris | | 1 | | | | | | | | | | | 1 | | | | | 1 |
| Disease of Heart | 22 | 19 | 2 | | 1 | 4 | 3 | 1 | 4 | 5 | 7 | 3 | 6 | 4 | 1 | | | 41 |
| Dropsy " | 2 | 2 | | | | 1 | | | 1 | | | | 2 | | | | | 4 |
| Enlargement " | 3 | 2 | 1 | | | | | 1 | | 1 | 1 | 1 | | | | | | 5 |
| Inflammation of Heart | 3 | 5 | 1 | | 2 | | | | 4 | 1 | | | | | | | | 8 |
| " of Vein | 1 | | | | | | | 1 | | | | | | | | | | 1 |
| Malformation of Heart | | 1 | 1 | | | | | | | | | | | | | | | 1 |
| Ossification " | | 1 | | | | | | | | | | | | 1 | | | | 1 |
| " of Arteries | 1 | | | | | | | | | | | | | | 1 | | | 1 |
| Rheumatism of Heart | | 3 | | | | | 1 | | | 2 | | | | | | | | 3 |
| | 34 | 36 | 7 | 0 | 3 | 5 | 4 | 3 | 9 | 10 | 8 | 5 | 9 | 5 | 2 | 0 | 0 | 70 |

6. *Digestive Organs.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abscess of Liver | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 |
| Abdominal Dropsy | 5 | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 3 | 2 | 1 | 1 | 0 | | 11 |
| Cancer, Bowels | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 1 |
| " Liver | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 1 |
| " Rectum | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 1 |
| " Stomach | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | | 3 |
| Cancrum Oris | 2 | 4 | 1 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 6 |
| Cirrhosus of Liver | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 1 |
| Congestion " | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 |
| Colic | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | | 4 |
| Consumption of Bowels | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 |
| Disease " | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | | 2 |
| " Liver | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | | 4 |
| " Stomach | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | | 3 |
| Dropsy of Liver | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | 1 |
| Enlargem't " | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | 1 |
| " Spleen | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 1 |
| Gastric Fever | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 |
| Hemorrhage of Bowels | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 2 |
| Hernia | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | | 3 |
| Ileus | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 |
| Indigestion | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 2 |
| Inflam. Stomach & Bowels | 22 | 30 | 11 | 6 | 3 | 0 | 0 | 1 | 5 | 6 | 3 | 4 | 4 | 7 | 2 | 0 | | 52 |
| " Liver | 7 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | | 9 |
| " Peritoneum | 9 | 16 | 0 | 0 | 1 | 1 | 1 | 4 | 6 | 8 | 2 | 2 | 0 | 0 | 0 | 0 | | 25 |
| Intussusception | 2 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 3 |
| Jaundice | 2 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | | 5 |
| Mortification Bowels | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 |
| Obstruction Bowels | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | | 3 |
| Perforation " | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 2 |
| Scirrhus Pancreas | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 2 |
| " Pylorus | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 1 |
| " Stomach | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 1 |
| Softening Stomach | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 2 |
| Teething | 2 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 4 |
| Ulceration of Bowels | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | | 6 |
| " Stomach | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | | 2 |
| " Throat | 0 | 3 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 3 |
| Worms | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 |
| | 77 | 97 | 36 | 13 | 19 | 6 | 1 | 3 | 16 | 21 | 15 | 10 | 13 | 19 | 4 | 0 | 0 | 174 |

### 7. *The Urinary Organs.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Albuminuria | 1 | | | | | | | | | | | 1 | | | | | | 1 |
| Diabetes | 2 | | | | | | | | | 1 | 1 | | | | | | | 2 |
| Disease of Kidneys | 2 | 2 | | | | 1 | 1 | | 1 | | 1 | | | | | | | 4 |
| Inflam. of Bladder | 1 | 1 | | | | | 1 | | | | 1 | | | | | | | 2 |
| " Kidneys | 4 | | | | | | | | | | 2 | 1 | | | 1 | | | 4 |
| Stone | 1 | | | | | | | | | | | | | 1 | | | | 1 |
| | 11 | 3 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 1 | 5 | 2 | 0 | 1 | 1 | 0 | 0 | 14 |

### 8. *Organs of Generation.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cancer Uterus | | 3 | | | | | | | | | 1 | 1 | | | 1 | | | 3 |
| Chlorosis | | 1 | | | | | | 1 | | | | | | | | | | 1 |
| Hemorrhage from Uterus | | 2 | | | | | | | | 2 | | | | | | | | 2 |
| Inflammation " | | 6 | | | | | | | | 6 | | | | | | | | 6 |
| Puerperal Fever | | 8 | | | | | | | 5 | 1 | 2 | | | | | | | 8 |
| " Mania | | 1 | | | | | | | 1 | | | | | | | | | 1 |
| Ovarian Dropsy | | 1 | | | | | | | 1 | | | | | | | | | 1 |
| " Tumor | | 2 | | | | | | | | | | | 1 | 1 | | | | 2 |
| | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 9 | 3 | 1 | 1 | 1 | 1 | 0 | 0 | 24 |

### 9. *Organs of Locomotion.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Caries of Cranium | 1 | | | | | | | | | 1 | | | | | | | | 1 |
| " Jaw | | 1 | | | | | | | | | | 1 | | | | | | 1 |
| " Spine | 1 | | | | | | | | | | | 1 | | | | | | 1 |
| Disease of Spine | 2 | 1 | | | 2 | 1 | | | | | | | | | | | | 3 |
| Effusion of Spinal Marrow | | 1 | | | | | | | | 1 | | | | | | | | 1 |
| Medul. Tumor Knee joint | | 1 | | | | | | | 1 | | | | | | | | | 1 |
| Rheumatism | 3 | 2 | | | | | 1 | | 1 | 1 | 1 | 1 | | | | | | 5 |
| Spinal Meningitis | | 1 | | | 1 | | | | | | | | | | | | | 1 |
| | 7 | 7 | 0 | 0 | 3 | 1 | 1 | 0 | 2 | 3 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 14 |

### 10. *The Integumentary System.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Purpura | 1 | 1 | 2 | | | | | | | | | | | | | | | 2 |
| Scorbutus | 2 | | | | | | | | 2 | | | | | | | | | 2 |
| Suppressed Eruption | 1 | | | | 1 | | | | | | | | | | | | | 1 |
| Ulcers | | 1 | | | | | | | | | | | | 1 | | | | 1 |
| | 4 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 6 |

### 11. *Old Age.*

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Old Age | 20 | 41 | | | | | | | | | | | 6 | 28 | 24 | 3 | | 61 |

### 12. *From External Causes.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Asphyxia | 3 | 3 | 6 | | | | | | | | | | | | | | | 6 |
| Burns and Scalds | 3 | 2 | | 3 | 1 | 1 | | | | | | | | | | | | 5 |
| Casualties | 13 | 2 | 1 | 1 | | 2 | 1 | 1 | 6 | 2 | | 1 | | | | | | 15 |
| Drowned | 24 | 3 | | | 1 | 2 | 1 | 2 | 6 | 9 | 6 | | 1 | | | | | 27 |
| Exposure | 1 | | | | | | | | | | | | | | | | | 1 |
| Fracture Leg | 1 | | | | | | | | 1 | | | | | | | | | 1 |
| " Pelvis | 1 | | | | | | | | 1 | | | | | | | | | 1 |
| " Skull | 1 | | | | | | | | | 1 | | | | | | | | 1 |
| Gun-shot Wound | 1 | | | | | | | | 1 | | | | | | | | | 1 |
| Intemperance | 2 | 4 | | | | | | | 1 | 4 | 1 | | | | | | | 6 |
| Suffocation | 1 | 3 | 3 | | | | | | | | | 1 | | | | | | 4 |
| Suicide | 3 | | | | | | | | 1 | | 2 | | | | | | | 3 |
| Wound | 1 | | | | | | | | 1 | | | | | | | | | 1 |
| | 55 | 17 | 10 | 4 | 2 | 5 | 2 | 3 | 18 | 16 | 9 | 2 | 1 | 0 | 0 | 0 | 0 | 72 |
| Unknown | 39 | 42 | 34 | 3 | 5 | | | | 8 | 6 | 11 | 7 | 3 | 2 | 2 | | | 81 |
| Still Born | 70 | 57 | 127 | | | | | | | | | | | | | | | 127 |

TABLE NO. 3.

*Deaths for the second quarter, at fifteen distinct periods of life.*

| | |
|---|---|
| Under 1 year, | 551 |
| 1 to 2 | 294 |
| 2 to 5 | 305 |
| 5 to 10 | 127 |
| 10 to 15 | 46 |
| 15 to 20 | 73 |
| 20 to 30 | 246 |
| 30 to 40 | 263 |
| 40 to 50 | 198 |
| 50 to 60 | 145 |
| 60 to 70 | 112 |
| 70 to 80 | 90 |
| 80 to 90 | 52 |
| 90 to 100 | 5 |
| 100 to 110 | 0 |
| | 2507 |
| Still Born | 127 |
| Total, | 2634 |

Among the deaths during the quarter, there were from the almshouse 237; people of color, 214; and from the country, 31, as follows:

| | Blacks. | Almshouse. | Country. |
|---|---|---|---|
| April, | 70 | 72 | 11 |
| May, | 61 | 82 | 9 |
| June, | 83 | 83 | 11 |
| Total, | 214 | 237 | 31 |

TABLE NO. 4.

*Meteorological Summary.*

| | TEMPERATURE. | | | SNOW AND RAIN. |
|---|---|---|---|---|
| | Highest. | Lowest. | Mean. | Inches. |
| April | 52.6° | 40.6° | 46 6° | 6.445 |
| May | 71.5 | 55.1 | 63.3 | 3.034 |
| June | 79.7 | 63.8 | 71.7 | 4.030 |

*The new Registration Law of Marriages, Births, and Deaths.*

With the expiration of the present or second quarter of the year, the new "Registration Law" goes into operation throughout the State. All the business, therefore, growing out of the collection and arrangement of the births and deaths in the city of Philadelphia, has been taken from the hands of the Board of Health, and their efficient and gentlemanly clerk, Samuel P. Marks, Esq., who, for many years, has catered to the entire satisfaction

of the profession in these matters, and has been transferred to the office of the "Register of Wills," which officer, has been appointed to carry out the details of the new law, in Philadelphia City and County.

This it will be perceived, is an important change, embracing a variety of new and interesting features, and involving numerous perplexities at the outset. Should the accumulated machinery, that will be required, in order to conduct the enlarged system of registration as proposed in this law, not work with regularity at the commencement, more than usual allowance will have to be granted by those interested in the provisions of the act, until the new officers, who are mere novices in the business, become familiar with their arduous duties. Already, have difficulties and inconveniences arisen to hinder the progress of the measure, and we opine that it will occupy an unlimited period, before uniformity and accuracy in securing and registering Births, Marriages, and Deaths, can be successfully effected.

It is well ascertained that the "Registration law" is by no means a popular measure in the State, as strong efforts were made to defeat the passage of the act in the Legislature. In the interior and elsewhere there are those at this day who would be gratified if it should fail to be carried out. We are not surprised, therefore, to find lukewarmness and tardiness prevailing in those quarters, where we should look for efficient action.

Like all laws of a general character, or, to use a legislative phrase, like all "fancy bills" having no favorite political object to accomplish, nor in any manner affecting the private interests of certain wealthy corporations, there is nothing provided to warm it into existence, and it is obliged to rely upon the cold and disinterested charities of strangers, who, though they have no individual interests to gratify, volunteer to furnish it with healthful nourishment.

We know not otherwise, how to account for the strange and unnecessary delay at Harrisburg in providing the proper forms for the Registers' offices throughout the State. Up to this period, July 22d, the Office in this city, where above all others they are highly necessary, owing to the rapid and constant accumulation of business, the Register, has not received a single

form Book from the Secretary of the Commonwealth; and if we are correctly informed, these books are not yet printed.

Nor has public notice to any extent been given of the precise time when this law goes into operation, nor has any extended information been published, as to the duties and obligations required of those, from whom the information is to be derived.

We speak advisedly for Philadelphia County when we assert, that many of our undertakers, sextons, clergymen, and even physicians and magistrates, have to plead entire ignorance of the requirements of this law, as well as for its existence; so limited has been public information on the subject.

Since the 3d of July, up to which date the Board of Health published their weekly statement of deaths, the Board have declined to receive certificates of Births and Deaths, while the Register of Wills, who has not been fully inducted into this special department of his office, not having had any preparation made for him at Harrisburg to register the returns, has necessarily allowed the whole business to remain a chaotic mass.

We have to regret, that in consequence of the change effected by the operation of this new registration law, we are in danger of losing the weekly statement of deaths, which for years we have been accustomed to receive from the Health Office; nor are we able, from our present information on this subject, to comprehend, or to learn with satisfaction, how or when we shall receive any public account of the births and deaths in our city, other than what is contained in the 13th section of the law; where we are told, that each Register furnishes the Secretary of the Commonwealth with a semi-annual statement, who files the same in his office, and annually transmits to the Legislature an abstract of the births, marriages, and deaths, which have occurred in each county in the State during the year. Consequently, if we are to be supplied with a statement, of the weekly, monthly or quarterly returns of deaths hereafter, we must rely upon private and irresponsible evidence and enterprise; unless the Register can be prevailed upon as a favor, to present a weekly table of the diseases and deaths therefrom, as has been done heretofore. If done at all it must be a favor, as no provision is contained in the law for any other public statement, than that to be made annually through the Legislature.

There are many features in this law, which we could have desired to have been otherwise expressed, but we wish to be satisfied with it as it is, until we have an opportunity to observe its operation, hoping that it may give general satisfaction and eventually confer a favor on the masses. We cannot, however, conceal the fact, that there are many hindrances to its progress; but we know of none, nor need we allude to any other in this connection which ought to cause greater solicitude than the indifference with which intelligent members of our profession treat this important measure. They speak of it as an onerous law, they regard the collecting of statistics, as is provided for in this act, both useless and unnecessary, while at the same time they view the whole plan as one impracticable in its character throughout the commonwealth.

It is true, the change from the old system may burden us with a little more labor, and occupy a little more of our time, than we have been accustomed to allot to the work of furnishing our certificates of births and deaths, but then the object is of such vital importance, that we cannot but hope every medical man who is inclined to find fault with the law, will waive his objections for the general good, as well as for the character of the profession of which he is a member, and give it his hearty approval and support.

We have always entertained the sentiment that the members of the medical profession above all others, should be and would be the firm advocates of a uniform and systematic registration of births, marriages, and deaths; that they are more competent to appreciate its advantages and to be profited by its invaluable results. If the mass of our profession does not sustain this law, who we inquire, will promote its claims? Its successful accomplishment rests with us. The intelligent public, the political economist, the vital statist, and the profession in those States where a system of registration has been introduced and proved successful, are looking on with deep interest to behold the result of a similar measure in this State. Shall they be disappointed?

On the other hand there are those in our own commonwealth, and we hope they are not many, who have from the beginning opposed the passage of this registration law, who will no doubt exult if it should prove a failure, and a failure too from the

supineness or negligence of that profession who should of all others prove its warmest admirers, its undeviating supporters and its best friends.

We sincerely trust, therefore, that the profession throughout the State will, as far as their means and opportunities may enable them, favor in every possible way its claims and its progress, sacrificing private judgment, whenever it can be done without a violation of the conscience, for the general good.

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*Answer to a Friend on organising the Medical Association.* By SAMUEL JACKSON, M. D., formerly of Northumberland.

MESSRS. EDITORS,—One of your correspondents thinks that the exclusion of *permanent members* from the *meetings* of the American Medical Association, would be unjust to them, and taking from them a privilege they have legitimately earned and one that has been accorded to them by the constitution under which they have acted. There is a show of truth in this reasoning, and we shall therefore inquire, by what means our projected exclusion may be justified.

All human associations are kept together, whether in politics, religion, or science, by mutual concessions, and often by injustice similar to that which is now complained of. In the forming of any constitution or code of laws, it is impossible to attain, at once, what is just and best and ought to be permanent. In the year 1838, the Constitution of Pennsylvania underwent a thorough scrutiny and the good old method of appointing judges whether supreme or not supreme, was confirmed and supposed to be established; therefore men of learning and talents, I hope some of them were such, quit the Bar and accepted appointments from the Governor, as they believed, for life. A few years roll by, the people determine to make their own appointments, and behold these men are deposed, I think that in their own *beautiful* language they say *ousted.*

There is nothing *perfect* of man's creating, hence there ought to be in all human associations, a generous spirit of accommodation, which indeed is the very ground-work of all society and of all government. Now where can we hope to find this if it be not

found in the Medical Profession? Above all men in this world, physicians ought to be ready to accommodate and to forget themselves in the promotion of good works. The moment a young man enters the threshold of medicine, he makes a great sacrifice on the altar of benevolence—*he denies himself and takes up his cross.* We may say of ourselves what Shylock says of the Jews, "sufferance is the badge of our nation." We must not therefore keep up a contention for our ultimate rights; to demand the last farthing is ignoble and ungenerous—*de minimis non curat Prætor*, says the Roman code.

But if it appear to a majority of the Association, that the exclusion would be an injustice, let it be only prospective; let the existing members enjoy their privilege; it can last for a few years only; and during this time the meetings will not be so large as to be encumbered by the few that will attend. We are trying to legislate for the future and not for the present generation.

But your ingenious correspondent finds yet another objection to the exclusion bill—*committees and officers are often continued from year to year.* This plea may be very easily disposed of. The same difficulty exists in our Pennsylvania State Society and yet we never found any trouble therefrom; for when the County Societies elect delegates to the State Society, they are careful to choose, among others, those who are officers and committee men. This ought however to be obligatory on them, and I had intended to propose at the last meeting of the State Society, a constitutional amendment to this effect; but there seemed to be no time to spare for things not pressing. Such an amendment might be easily introduced into the constitution of the Association; or it might be decreed that all committee men and officers are *ex officio* delegates to the next meeting.

Your correspondent thinks that it "rests with the proposers of the innovation to justify it if they can." This is sound doctrine and we adopt it without hesitation. We are not much conversant with human affairs and therefore speak with great diffidence; but as far as our knowledge goes, the admission of *permanent members* is an anomaly in human legislation. Does it exist in any other association whether religious, political, or scientific? What interminable wrangling would there not be in

congress, state legislatures, in religious conventions, if the rule obtained! and do you suppose that our physicians are free from the troublesome vice of obtrusive loquacity? If this rule of admission be continued, the time will come and will soon overtake us, when no house will hold both them and the delegates; no voice be heard by the vast assembly; no time will suffice for their ambitious *demonstrations*—I beg pardon for using this word in our native sense.

Another objection is, that some *permanent members* may deteriorate and become totally unworthy of the privilege; they may become such as you would not delegate, such as you would be ashamed to meet. But says your correspondent—"the Association has the power to expel members who have proved themselves really unworthy." Now I should like to know where that power is given. But suppose the constitution were amended to this effect, what a pretty piece of business it would occasion at a meeting of the great Association, where there ought to be nothing unworthy of the *pure physician*, nothing but harmony, good feeling, and love! What, prosecute in this sacred place a poor unfortunate brother for stealing your patient or selling quack medicines! fie, fie. "Don't wash your dirty linen in public."

In what your correspondent calls his "real argument of importance," he makes a most capital blunder. He deprecates "the abolition of permanent membership," and says, "that if those appointed delegates one year, cease with that year to be members of the Association," there would be a difficulty in the appointing of special committees. Now this deprecated abolition of permanent membership has never been proposed. Our plan is, on the contrary, to make every respectable physician in the United States a permanent member as quickly as possible. Look to page seven of our little discourse before the Medical Society and you will find these words—"the privilege granted to what are called permanent members of attending all subsequent meetings and partaking in the debates, is a monstrous anomaly." Now you see that it is not permanent *membership* that we would abolish, but the permanent *privilege* of attending the meetings and making speeches to obstruct the proceedings.

Your correspondent says, "these privileges (of being elected delegates) should be made to rotate amongst all whose characters

and attainments are worthy of a place in the great American fellowship." Very well said—*si sic omnia dixisset.* Of this the County and State Societies will doubtless be very careful, but you must not expect them to prove infallible. Their respect for Professors will always appear, and a full proportion of them will always be elected. It has been proposed, more cunningly than wisely, to allow those schools which live up to a certain *beau-ideal*, to send delegates; and the excellent and authoritative author of this project thinks, that the schools will thus be goaded to a more faithful discharge of their duty. The *good* workings of this began at once, even at Richmond. At the first mention of it, the University of Virginia took fire as by lightning, and exploded, under the direction of a master engineer, with such violence as to frighten a majority out of their wits and to obfuscate others with sand and dust in their eyes: hence they received the said University on its own terms. So much for the first experiment—time will tell the rest, if the new plan should be adopted. Schools will come in from at least three of the four cardinal winds, and the question will arise every year, whether this and that shall be admitted or rejected. Let us advise the anxious schools to bring forward their case in the afternoon, when the members have been saturated with good dinners; for this is the time, according to metaphysicians, to ask a favor. Physicians like other mortals, are fond of good cheer; and that they feel the good effects thereof, let them testify for themselves. At the meeting in Charleston they devoted a marble tablet to commemorate their satisfaction and their "grateful sense of the hospitalities and of the numerous delicate attentions" received: and so profoundly were they impressed with the good and benevolent effects of a full stomach that they *unanimously* resolved to hold the "hospitalities and delicate attentions" among their "most pleasing recollections as long as life and thought shall endure." Now mark, this was done after dinner. Voltaire thinks that a comfortable evacuation has an equally benevolent effect—we leave it to the Association to decide. The author of the above potent resolution, had just offered a pious amendment to the constitution by inserting the words—"in reliance on Divine guidance and support;" but you see it required none of

this extraneous *support* to enable him to recollect in the awful hour of death, the good cheer of Charleston.

At Richmond too, the fascinations of the table received their merited praise, nor did they fail of producing their wonted effects. If the Association were so ungrateful as to decree no marble memorial, nor yet to promise some pleasing recollections of them *in the agonies of death*, some members, more sensible to the blessings they enjoyed, were thrown thereby into such an extatic state as to dance most lustily to the orgies of the Virginian Bacchus, as though they would sweat off the poison of the tarantula. Like Tam O'Shanter's warlocks and witches—

> Hornpipes an' jigs, strathspeys an' reels
> Put life an' metal i' their heels.

Now Messrs. Editors I beg pardon for this long digression, pardon too of my friend Hartshorne for leaving him so long; and if you consider it an intolerable evil, I would recommend a method of deriving from it some compensative good. It was an example in my first grammar, that it is an exceedingly good thing to profit by another's madness—*Optimum est alienâ frui insaniâ.* Whoever then among physicians is afflicted with low spirits, vapors, blues, cold feet, a feeble circulation of blood and spirits, let them go to New York next May, prepare their stomach in the manner of the venerated Ancients, and then put on pumps.

Now for this truly important advice we expect no other reward than to be favored with their "most pleasing recollections so long as life and thought shall endure;" and that when death hovers over them with his sable wings—*cum mors atris circumvolat alis*—they will not forget their humble adviser and friend.

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*Case of Acute Metritis treated successfully with Urate of Ammonia.* By Dr. C. F. Percival.

This article appears to be advancing in public attention, since a communication on its value in this Journal, in regard to Synovial and Serous Inflammations, as the following communication will exhibit.

It appears, also, that it has been tried advantageously in chro-

nic cutaneous diseases and in tubercle of the lung.* This reminds us that it was once the practice in Switzerland to treat consumptives by a residence over the stalls of animals.

*Benton, Lowndes Co., Alabama,* May 30th, 1852.

PROFESSOR HORNER:

*Dear Sir,*—On the 25th of April I was called to Dinah Brown, a negress belonging to J. T. Brown, nine miles from my house. On the 15th of March she was delivered of a healthy child. She did well during the month, and on the 19th of April went into the field to labor. She there was caught in the violent storm which occurred on that eve, and walked home fatigued and very wet. About midnight she was taken with violent pains in the uterine region, and about 4 had a violent and excessive hemorrhage. She, however, rallied under the treatment of the plantation midwife, and got rather better, until the 23d, when I was sent for, she being worse. I found her perfectly prostrated, pulse 135, skin hot and dry, at times cold, clammy perspiration breaking out; countenance anxious. Auscultation revealed a creaking sound over uterus, which, enlarged almost to four times its size, was scarcely to be touched from the excessive pain the most careful examination produced; her bowels costive. I placed her under the use of mercurials and opium in two grain doses every three hours, opening the lower bowel by injection of turpentine suspended in white of egg and mucilage, and applied a blister over the whole abdomen. I saw her every few hours, and paid her all the attention a case of this kind requires, occasionally altering my prescriptions. The next morning, the blister having been previously dressed, the tenderness had not decreased much, but she being more comfortable and the secretions having assumed a healthier action, I applied a poultice consisting of our red earth well saturated with urine. I at that time looked on the case as hopeless, although the woman *was* a little better. On Sunday she was improving, and I continued the use of the urinated earth. The next day I left for Virginia, where I had the pleasure of meeting you, but not knowing the result of my case, would not tell it.

On my arrival home I found her well, though still weak. She

* Brit. and For. Med. Chir. Review, July, 1852; from Bucknor's Report, No. 19.

is up and spinning; she had some of the worst symptoms after I left, which were promptly relieved by injections. So much for the Urate of Ammonia. I have often been puzzled at the success I have met by using fresh cow dung poultices in cases of diseases of the knee joint, and have from motives of *fear* kept from relating cases of white swelling which I know were relieved by its use. I first learned it in the County of Armagh in Ireland; that it is of great benefit I know. And that the woman Dinah owes her life to the fact of my having read your paper on Urate of Ammonia in that knee case, is as true. And it does sometimes gladden the heart of a physician to know his efforts have been instrumental in doing good; and as the laurel belongs to you and not to me, I send the case to you, and pray for your prosperity on earth and future happiness in a better and brighter world.

Yours, affectionately,

C. F. PERCIVAL.

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## BIBLIOGRAPHICAL NOTICES.

*Illustrated Manual of Operative Surgery and Surgical Anatomy.* By MM. CL. BERNARD and CH. HUETTE. *Edited with notes and additions, and adapted to the use of the American Medical Student, by* W. H. VAN BUREN, M. D., Surgeon to Bellevue Hospital, &c., and C. E. ISAACS, M. D., Demonstrator of Anatomy in the College of Physicians and Surgeons, New York. *Illustrated with steel engravings from drawings after nature, by* M. J. LÉVEILLÉ. *Designed to serve as a companion to the ordinary text-books of Surgery.* New York: H. Bailliere, 290 Broadway. 1852. Part II. (pp. 188 and 27 plates.)

The second part of the American translation of Bernard and Huette's manual maintains in all respects the character established by the first as an excellent reproduction of the French original, and as a beautiful and instructive atlas of Operative

Surgery. It cannot fail to prove a useful adjunct to the different works on Operative Surgery adopted in our schools, and thus handsomely to serve the modest purpose for which it is especially offered to the profession, whilst it may be resorted to with advantage by teachers and practitioners, even in the absence of the text-books.

The present volume begins with eight preliminary plates representing respectively and successively the instruments employed in trepanning, in operating on the eye and the ear, on the larynx and trachea, in the treatment of nasal polypi, in operating on the tonsils and soft palate and on the pharynx and larynx. After these comes Plate 27th, on amputation at the hip joint, in regular continuation of the articular amputations. This is followed by four plates devoted to amputations in the continuity of limbs, beginning with amputations of the foot and hand and ending with amputation of the thigh. Then we have three plates of exsections of the superior and inferior extremities and of the upper and lower jaw. These are succeeded by one on trepanning of the bones of the cranium, (including, as usual, the surgical anatomy of the parts involved in the operation); two on operations on the eyelids; two on the surgical anatomy of the lacrymal apparatus and of the nasal fossæ, the mouth and the pharynx, with the operations performed upon their different ducts and passages; one upon the surgical anatomy and operations relating to the muscles of the eye; one delineating the operation for cataract by depression; another representing the different stages of the operation for extraction, and the various methods of operating for artificial pupil; another representing operations upon the external and internal ear and the surgical anatomy of the parts concerned; two plates devoted to hare-lip, cheiloplasty and other autoplastic operations on the orifice of the mouth; and lastly, by one plate (46th) on rhinoplasty.

It will be seen from the foregoing cursory list that the editors have furnished us in their last instalment (small though it be and beautifully less in comparison with their first) with many of the most important and interesting of the entire series of illustrations. The accompanying text is well arranged, clear, concise and sufficiently full for the purpose intended; and appears to be elegantly and accurately rendered into our vernacular. On every

account therefore we shall hail with interest the speedy completion of the work. It would give us sincere pleasure to view (and *re*-view) our friends' production as a whole—especially in colors. As to these latter we are yet in darkness. Nos. 1 and 2 have come to us in mourning—shorn of half their glory. We trust that the forthcoming portions will throw a better light upon the subject so far as we may be concerned. In this matter of reviewing we confess to some weakness for the "feathers" along with the "fuss"; and when we have to introduce a book to our readers, we expect to see it in the best dress that belongs to it.

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*The Principles of Surgery.* By JAMES MILLER, F. R. S. E., F. R. C. S. E. &c. &c. *Third American, from the second and enlarged Edinburgh Edition. Illustrated by two hundred and forty engravings on wood. Revised with additions by* F. W. SARGENT, M. D., Member of the College of Physicians, Author of Minor Surgery, &c. Philadelphia, Blanchard & Lea, 1852.

The third American, from the second English edition of this standard work of Professor Miller, has been greatly enriched by the notes and bibliography of the edition, so as to present a resumé of all that has been added to the literature of Surgery, since the appearance of the English prototype. Dr. F. Sargent deserves the thanks of the profession for his faithful industry. Of the original work we have already, in the previous edition, expressed our opinion, and need only add our warm recommendation of it to student and practitioner.

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*An analysis of Physiology; being a condensed view of the most important facts and doctrines. Designed especially for the use of students.* By JOHN J. REESE, M. D., Lecturer on Materia Medica and Therapeutics, in the Medical Institue of Philadelphia, &c. &c. Second Edition, revised and enlarged. Philadelphia, Lindsay & Blakiston.

The present edition of Dr. Reese's convenient analysis, has been remodelled by the author, and much of it rewritten; and all that has transpired worthy of note, since the previous issue, has been introduced. As a faithful digest, therefore, it cannot fail to be extremely useful to the student, to whom we cordially recommend it.

# THE MEDICAL EXAMINER.

PHILADELPHIA, AUGUST, 1852.

We transfer to our pages, with great pleasure, the following extract from a review of Dr. Gross's work on the Urinary Organs, in the July No. of the British and Foreign Medico-Chirurgical Review, as evidence of a kindlier feeling on the part of foreign journals towards American authors. The reviewer has been speaking of an English work on a kindred subject, by Dr. Coulson, in connection with which he says:

"It has remained for an American writer to wipe away this reproach; and so completely has the task been fulfilled, that we venture to predict for Dr. Gross's treatise a place in the literature of surgery, worthy to rank with the best works of the present age. Not merely is the matter good, but the getting up of the volume is most creditable to transatlantic enterprise; the paper and print would do credit to a first rate London establishment; and the numerous wood cuts which illustrate it demonstrate that America is making rapid advances in this department of art. We have, indeed, unfeigned pleasure in congratulating all concerned in this publication, on the result of their labors; and experience a feeling something like what might animate a long expectant husbandman, who, oftentimes disappointed by the produce of a favorite field, is at last agreeably surprised by a stately crop, which may bear comparison with any of its former rivals. The grounds of our high appreciation of the work will be obvious as we proceed; and we doubt not that the present facilities for obtaining American books will induce many of our readers to verify our recommendation by their own perusal of it."

### PIRRIE'S SURGERY.

We received a copy of this excellent treatise too late for notice in this number. In glancing over it, it appears to be admirably executed and well calculated for a text book for students, amongst whom, we doubt not, it will soon become popular.

After we had gone to press with our last number, we learned the death of Dr. JAS. B. ROGERS, Professor of Chemistry in the University of Pennsylvania.

Dr. Roger's health had been failing for some months past, from an attack of albuminuria, which proved fatal under a complication with pneumonia. He was elected professor of Chemistry in the University in 1847, while holding a similar position in Franklin Medical College. He was a popular and successful teacher in his department, and possessed in an eminent degree the love and confidence of all who knew him.

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## MEDICAL NEWS.

DR. EDWARD HARTSHORNE has been elected Surgeon to Wills' Hospital for diseases of the eyes and limbs, in place of Dr. Neill resigned.

HOSPITAL OF THE PROTESTANT EPISCOPAL CHURCH IN PHILADELPHIA.—The board of managers have recently appointed the following gentlemen as members of the hospital staff.

*Attending Physicians.*—Francis West, M. D., Jno. B. Biddle, M. D. Francis G. Smith, M. D., John J. Reese, M. D.

*Attending Surgeons.*—Wm. B. Page, M. D., H. H. Smith, M. D., B. Henry, M. D., H. Drayton, M. D.

*Obstetricians.*—Anthony E. Stocker, M. D., Jno. Wiltbank, M. D.

*Assistant Physicians.*—A. Wilcocks, M. D., R. Clements, M. D., F. W. Lewis, M. D., Moreton Stillé, M. D.

*Assistant Surgeons.*—A. Hewson, M. D., W. Hunt, M. D., R. F. Penrose, M. D., J. C. Patterson, M. D.

A lot of ground, with a convenient building, has been presented to the Board by Miss Leamy of this city, and it is their intention to commence operations immediately.

THE SAINT JOSEPH'S HOSPITAL.—At a meeting of the Managers of this Institution, on the 12th inst., Dr. Joseph Leidy was unanimously appointed Pathologist to this institution.

Dr. HORNER, Professor of Anatomy in the University of Pennsylvania, has recently met with what may be called an aortico-œsophageal muscle, which arose from the descending thoracic aorta, and proceeding transversely, was attached to the œsophagus about two and a half inches below the division of the trachea. It was about eight lines

wide. He has met in his dissections with two instances of the broncho-œsophageal muscle, of Professor Hyrtl, of Vienna. The aortico-œsophageal belongs to the same category of muscular attachment of the œsophagus to viscera of the thorax.

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# RECORD OF MEDICAL SCIENCE.

## PATHOLOGY AND PRACTICE OF MEDICINE.

*Pulmonary Emphysema.*—Dr. SELLER read a paper entitled, "On the Production of Vesicular Emphysema in the Lungs, as Explicable by the Principles of Pneumatics."

The object of this paper was to show that the act of expiration must be essentially the cause of vesicular emphysema, in so far as it is a mechanical effect, in opposition to the view upheld by many recent authorities, under which it is regarded as a result of forcible inspiration.

Founding on the acknowledged belief, that in inspiration the air enters each air-cell on the principle of suction, the author concluded, that the inspired air could only become a cause of unusual distension to any portion of the air-cells, if it were found that the inspiratory muscular forces were capable, under given circumstances, of becoming developed to an extent sufficient to overcome a large proportion of the atmospheric pressure exerted on the outer surface of the walls of the chest—a pressure amounting, on a moderate computation, to 10,000 pounds.

To the view adopted by Dr. William T. Gairdner, in his recent papers on "Bronchitis and Bronchial Obstruction," Dr. S. devoted a particular consideration. He represented Dr. Gairdner's view as an assumption supported only by a limited number of facts, to the effect, that vesicular emphysema never occurs unless the dilatability of the lung, by the collapse of portions of its substance, has become less than the expansibility of the chest under the inspiratory forces. Dr. S. described Dr. G.'s view as highly ingenious, and much less at variance with the obvious principles of pneumatics than the rest of the views which ascribe vesicular emphysema to inspiration; but he nevertheless regarded it as untenable, for the following reasons:—1. Because there is great reason to doubt if collapse of a portion or portions of the lungs be uniformly a concomitant of vesicular emphysema; 2. Because it is an unsupported assumption that the chest can expand beyond the present limits to which the lungs can dilate, the contrary being plainly the general rule; 3. Because, were vesicular emphysema so produced, there could be no partial form of the disease, but every part of the lung of one side unaffected with collapse would exhibit a similar state of pathological alteration; 4. Be-

cause, though no unusual inspiratory force, in the case supposed, would be requisite to overcome atmospheric pressure on the exterior of the chest, since, could the enlargement occur, it might take place no faster than the air could enter from without; yet an unestimated additional inspiratory force would be necessary to overcome the resistance of the aggregate of the walls of all the still pervious air-cells, in each inspiration by which a distension beyond their greatest natural magnitude was effected —the possibility of the exertion of such a force being an unsupported assumption; 5. Because, it is not shown, in the cases of vesicular emphysema founded on by Dr. Gairdner, that the aggregate of the distension of the air-cells is in exact correspondence, as to volume, with the aggregate of the decrements which the collapsed portions of the lung have suffered, which should hold, were this view correct.

In support of the view, that expiration is the mechanical cause of vesicular emphysema, Dr. S. referred to forcible compression of the pulmonary air-bag during acts of expiration, great in proportion to the rapidity with which the expiatory forces are exerted, and to the amount of impediment offered at the moment to the free egress of the air by the windpipe; and also to those occasions when, after a very full inspiration, the powerful muscles of expiration violently compress the abdomen and thorax at the same time that the larynx is forcibly closed, so that the air within the lungs is strongly condensed before it is permitted to escape outwards, by the relaxation of the orifice of the larynx. He referred to the frequency of vesicular emphysema in draught-horses, in which it is plainly produced by acts of the latter kind. In proof that pressure of this kind could exercise a distending force on the air-cells when it took place unequally, he referred to the bursting of a bladder by a weight placed upon it, and to the bursting of a paper bag of air when struck at one end. He admitted, however, that the double pressure from without and from within at the same moment, may so far injure the vital texture of the walls of the air-cells, by the compression of the blood-vessels, as to render the distending force more effectual than it otherwise would be.

Dr. W. T. GAIRDNER said, that, notwithstanding the arguments advanced by Dr. Seller, he was still of opinion that the inspiration-theory under the modification which he had advanced in his papers on bronchitis, was the only one which could on mechanical principles account for the production of emphysema. He could not at that meeting enter into the discussion of the exceedingly elaborate paper just read, but he would make one or two observations, and endeavor, at the same time, to place his own view in a simple and clear form before the members. But first, as to the expiration-theories of emphysema in general, he was still at a loss to understand how the force of expiration could ever become a cause of dilatation, either of the whole pulmonary sac, or of a portion of its vesicle. Expiration was essentially a *compressing* force, acting from without, and tending to *contraction* of the air-vesicles; and although the effect of this force might to a certain extent be counteracted or neutralised, when the glottis was closed, by counter-pressure from

within, the amount of this internal pressure was always exactly proportionate to the external, and could, therefore, never act so as to produce distension. The case of the air-filled bladder burst by external pressure, did not, in Dr. G.'s opinion, at all bear upon the question; for, in the first place, the bladder in such circumstances bursts because it is compressed in only one direction, and allowed to expand indefinitely in others, whereas the lung is guarded on all sides by the thoracic parietes, which, in the physiological act of coughing, or other impulsive expiratory acts, prevent its air-cells from being subjected to any kind of distortion of form, such as occurs under the one-sided pressure which produces bursting of the bladder. But, further, the blown bladder, although burst by external pressure, is really never distended, but on the contrary diminished in volume; whereas no one can doubt that in emphysema the air-cells are not so much altered in form as subjected to great distension. The blown bladder is flattened by the force which bursts it; the emphysematous air-cells are permanently expanded, and retain the rounded appearance, even when many of them have been fused into one large bulla by partial destruction of their walls. But, supposing it granted that the expiatory forces might, under peculiar circumstances, act so as to produce partial compression and disorganization of individual air-cells, this would not account for the cases where inordinate distension of the air-cells was observed over a large extent of the lung; still less for the alleged cases of universal emphysema, which had been advanced in opposition to his (Dr. G.'s) theory. The view he (Dr. G.) took of the production of emphysema was this:—Two complex forces acted mechanically on the lung in respiration; the one, that of expiration, a compressing and contracting force as regards the pulmonary air-cells; the other, that of inspiration, an expanding and dilating force. Independently of the arguments already used, he thought it natural to ascribe emphysema, in so far as this was a mechanical lesion, to the action of the latter or dilating force, in preference to the former. It was not difficult to conceive that, as the forces of inspiration have the power, physiologically, to distend their air-cells *up to* their normal maximum, so they might, under certain pathological circumstances, have the power of distending certain air-cells *beyond* their normal maximum. This was what had been assumed to take place by all the advocates of the inspiration theory of emphysema; none of whom, however, had, in Dr. G.'s opinion, correctly generalized the condition of emphysema, or stated the law of its production. In fact, the lung was accurately adapted by nature, in size and form, to the case in which it was enclosed, and the alternate expansion and contraction of which it followed, in consequence of mechanical laws which were understood by every one. No amount of inspiratory power could, in the physiological state, dilate any portion of the lung inordinately, because the thoracic case in which the lung was enclosed was not dilated beyond a certain amount, and the lung was adapted by nature to bear dilation to that amount without injury. But let any portion of the lung be rendered undilatable by disease, *being at the same time diminished in volume*, and it then be-

came possible for the chest to expand so as inordinately to dilate the remaining pervious air-cells, which would tend to occupy the space forfeited by those which were diminished in bulk. Contraction, collapse, or atrophy, therefore, of some portions of the lung, from disease, with inordinate expansion of the sounder portions under violent acts of inspiration, were the conditions under which emphysema was produced. In writing at large on the subject of bronchitis and its consequences, Dr. G. said, he had been at some pains to describe the variety of these lesions observed in the dead body, and to demonstrate by an analysis of cases of emphysema, the coincidence of that affection with the states of the lung leading to partially diminished volume. He had also fully explained the sources of collapse and atrophy of the lung, and directed attention to the great frequency of these affections, and to their connection with, and dependence upon, obstruction of the bronchi in bronchitis and other diseased states. He was, therefore, prepared to state that his theory of emphysema was the fruit of an extensive observation of facts, and he believed it would be found universally applicable, to the exclusion of the expiration-theories, and all the inspiration-theories not founded on the idea of partially diminished bulk in the lung, as the essential cause of emphysema. Other circumstances in the natural history of emphysema were perfectly explained by this theory; as, for instance, its ordinary seat in the anterior edges, the parts least subject to other diseased conditions; its frequency in connection with retrograde or cicatrising tubercle, and its comparative rarity in connection with advancing tubercular disease, and generally with all states of the lung in which large excavations, with flaccid dilatable walls, took the place of the pulmonary air-cells in maintaining the full volume of the lung in the act of inspiration. For the fuller developement of his views, Dr. Gairdner referred to his memoir on bronchitis, and expressed himself much gratified with the intelligent and careful consideration which Dr. Seller had thought it worth while to bestow on his (Dr. G.'s) labors.

Dr. Alison remarked that he was disposed to agree generally with Dr. Seller in believing emphysema to be produced in expiration. He had never been able to understand what force, adequate to the rupture of the walls of the cells, could be supposed to be called into play by any effort of *inspiration*. He did not think that emphysema of the lung was *always* determined by other lesions, as said by Dr. Gairdner; and thought he had seen cases of emphysema affecting the whole lung, at least unattended by such condensation of any part of the lung, as to render it impervious to the air.

Mr. G. Glover commenced by remarking that, in the present transition state of medical science, he was glad to find the author of the paper appealing to acknowledged principles in physics. It was dangerous to proceed practically upon an imperfect knowledge of a few first principles in science; and when applying the principles of pneumatics as "explicable of vesicular emphysema," our ideas must be clear and precise, and the application correct;—not attributing to causes effects

for which they are quite inadequate. The unscientific term "suction," used in the paper, was vague, and often meant nothing, at least nothing upon which correct reasoning could be founded. The enormous pressure attributed to the tendency to a vacuum ("suction") in the chest during tranquil breathing, was greatly overrated. And to show the small amount of the force, he suggested to Dr. Seller the simple experiment of putting one end of a glass tube in water, and the other end in his mouth, during ordinary breathing, when he would observe the water scarcely rising *one inch* in the tube during each inspiration, instead of thirty-three feet, which would be required to represent about fifteen pounds of pressure on every square inch of surface. With regard to Dr. Seller's observation on the bursting of a bladder and a child's paper bag, he stated, that while the paper bag would be easily burst by a sudden percussion, the bladder containing air would sustain hundreds of pounds of pressure before bursting. It is a fundamental principle in pneumatics, that pressure exerted on a fluid must be equal, and in all directions; so that no part of a bladder containing air, and subjected to pressure, could be unequally pressed upon. The bursting pressure would be equally diffused over every part of the surface of the bladder. As an illustration of the principle of equal pressure in fluids, he gave the instance of the early development of the embryo in the uterus, where the most delicate structure floating in a fluid is not ruptured by the violent motions of the mother, or by external violence. He had listened attentively to the paper, but was not prepared to support either theory, regarding the production of vesicular emphysema by inspiration or expiration. If produced by inspiration or expiration, it would be of more frequent occurrence. At the same time, in case of asthma, he would feel more inclined to attribute the production or increase of emphysema to the long and laborious efforts of expiration than the short and easy inspirations. He mentioned that, some days before, he had opened the body of an asthmatic female, where the whole lungs appeared to be emphysematous; and when placed in water they floated very lightly on the surface. Drs. Keiller and Menzies were present at the dissection.

Dr. Alexander Wood was of opinion, that in the discussion, in the anxiety to attend to physical laws, vital laws had been too much overlooked. The natural tendency of every yielding tube was to become stretched when pressed by air on its internal surface. In health the air-cells of the lungs resisted this by their vital elasticity. The tendency of all the diseases with which emphysema was associated was to destroy this elasticity. He doubted the alleged fact on which the new theory was founded—that some diminution in the size of the lungs was found in every case of emphysema. He believed that the forcible entrance of air into the lungs could produce emphysema, as was witnessed as the sequel of too zealous efforts to resuscitate still-born children. He believed that impediments to the exit of free air did the same, or else how was emphysema produced in hooping cough? Not surely by the impeded inspiration, but by the impossibility of the air cells getting

rid of their contents; while, at the same time, the collapsing lung and falling down parietes forcibly compressed it.

Dr. Strachan, of Dollar, in illustration of the applicability of the inspiration-theories to the production of emphysema, referred to the expansion and bursting of a partially air-filled bladder under the receiver of an air-pump, the exhaustion of the receiver producing on the walls of the bladder a similar effect to that exerted by the expansion of the thoracic parietes on the lung.

Dr. Bennet observed that, with respect to vital and physical properties, he considered that the former were so called simply because they could not, in the present state of science, be explained by physical laws, and were peculiar to living beings. The present tendency of physiology was to cultivate physics and chemistry; and in proportion as these explained what was formerly unknown, the so-called vital phenomena diminished in number. No doubt some of these latter, such as contractility in muscle, sensibility in nerve, reproduction, and so on, had not yet been brought into the domain of physics, and hence why these must still be considered as purely vital phenomena. With regard to emphysema, however, the case was different; and it appeared to him that its production, like the phenomena of respiration, was, to a certain extent, explicable by physical laws. In such a case he was unable to understand what Dr. Wood meant by vital, as distinguished from physical resistance of the lung. It appeared to him clear, that if, in the healthy condition, the lungs completely filled the thoracic cavity, and that if, when diseased, a portion of their structure was collapsed, that the sound parts would be expanded by the pressure of the atmosphere, and fill up the vacant space. This was Dr. Gairdner's theory. It had indeed been urged, that the overdistended, or emphysematous pulmonary tissue, occurred without such collapse having been seen. But he considered this to be an example of what frequently occurred in pathological investigation, namely, that such partial collapse of a lung might not be seen, because not looked for. Let a lesion be once carefully described, and the attention of observers directed to it, and a morbid appearance formerly unknown subsequently became very common. This he believed to be the case with partial collapse and condensations of the lung as a cause of emphysema. He had himself remarked the frequency of emphysema in conjunction with certain diseases producing partial contraction and condensation of the lung, as in chronic phthsis. The same fact had been observed by Dr. Ramage, who, in consequence, had erroneously considered that the production of emphysema was the natural cure of tubercular caverns. He also agreed with Dr. Gairdner, as to inspiration being the act of real difficulty in cases of emphysema. The prolonged expiration was principally owing to the impaired elasticity of the pulmonary tissue itself, whereby the air-vesicles were not compressed, and the chief mechanical force during the expiratory act more or less impeded.

Dr. W. T. Gairdner observed, that he scarcely required to add one word in explanation to what had fallen from Dr. Bennet, with which he

entirely agreed so far as the subject of emphysema was concerned. He would, however, remark, that there were three different forms of atrophic lesion, which might give rise to emphysema: the simple mechanical collapse of the lung; the simple chronic atrophy, resulting from that collapse; and the various kinds of atrophy with induration, resulting from pneumonia, tubercle, etc. The last could not be overlooked with moderate attention; but the first might easily be neglected by a superficial observer; and the second, having mostly negative characters, was almost sure to be overlooked by any one, however careful, who came unprepared to the investigation. Since he had given particular attention to the development of emphysema, however, Dr. G. had not found a single instance of that lesion in which he had not been able to demonstrate its connection with one or other form of atrophic disease.—*Trans. Med. Chir. Soc. in London Monthly Journal, May* 1852.

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*Case of Pseudo-Membranous Laryngo-Bronchitis, or Croup, in an Adult.* By M. BOUILLAUD. *Clinical Remarks on Laryngo-Bronchial Diphtheritis, or Croup, in adults.* By DR. BONNET.—The subject of M. BOUILLAUD'S case was a pregnant female, aged 33, of impaired constitution, who was seized, on the 4th February, with symptoms of inflammation of the larynx and bronchi. On the 10th, she miscarried, and soon after died exhausted. A *post-mortem* examination disclosed signs of inflammation in the air-passages, in which were found also a quantity of false membrane. During her illness she had coughed up some casts of the trachea and bronchi; and M. Bouillaud thinks that death was rather due to the exhaustion produced by the miscarriage.

Dr. BONNET relates two cases, also occurring in pregnant females. One of them died; the other recovered, and subsequently gave birth to a living infant. He does not think that diphtheritic exudation is always connected with inflammation. The only rational treatment is by emetics, which act, first, by causing mechanical expulsion; and secondly, by augmenting the secretion of the air-tubes, so as to favor the softening and removal of the false membrane. Their production of diaphoresis is also valuable. In cases of imminent danger, Dr. Bonnet would perform tracheotomy.—*London Journal of Medicine, June,* 1852.

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*Case of Spasmodic Constriction of the Œsophagus.* By Dr. B. PALAIS.—The patient was a young man, aged 21, who had intermittent fever. Dr. Palais was called to him in the hospital at Montmorail, on December 22, 1851, where he found him in the following condition:

The skin was in general cold; there was trembling of the whole body; the pulse was 60; the jaws were contracted; deglutition was impossible, and liquids produced severe pain in the pharynx, and caused painful efforts to swallow, which congested the face; there was difficulty in protruding the tongue; the front of the neck was tender, and the movements of this part were impaired, while the limbs and back could be bent; the urine was scanty; the patient tossed himself about in bed; he understood questions, but could only answer them imperfectly. Sina-

pisms were applied several times to the lower limbs; warmth was applied to the body; and ether mixture was given; and the patient was bled from the arm.

*December* 23. The same state continuing, the bleeding was repeated.

*December* 25. The patient was calm; he could swallow a little, but with difficulty, so that it seemed as if the fluids were passing through a filter. The pulse was 72; the skin was regaining its normal heat. He complained of pain at the upper part of the sternum, and also between the lower ribs on the left side. Nothing abnormal was detected in the thorax by auscultation.

*December* 28. The dysphagia had gradually ceased, and there now appeared slight attacks of ague, which continued till the 31st, and then yielded to sulphate of quinine.—*Ibid.*

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*On Diphtheritis of the glans in some cases of paralysis.* By Dr. Hérard.—In two persons, who had been the subjects of cerebral hæmorrhage followed by hemiplegia, Dr. Hérard found a morbid exudation at the extremity of the glans, round the urinary meatus. In both cases, there was incontinence of fæces and urine; and the attention of Dr. Hérard was directed to the glans by the patient complaining of pain at the extremity of the penis. The exudation was removed by careful cleansing, and the use of acid nitrate of mercury.

Dr. Hérard thinks that the origin of the diphtheritic eruption is sufficiently explained, by the penis having been constantly plunged in a metallic vessel containing decomposed urine, and being thus exposed to the emanations therefrom.—*London. Journ. Med.*

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*Some facts in Pathological Anatomy regarding the state of the spleen in the intermittent fever of Madagascar.* By Dr. Rochard.—Dr. Rochard had an opportunity of observing a large number of severe cases of intermittent fever in Madagascar, in 1830. He gives the following particulars regarding the state of the spleen.

In 153 carefully performed necropsies, he found the spleen diminished in 31 cases; in 22 of these, the patient had not taken the smallest quantity of sulphate of quinine. In the remaining 9, there was nothing abnormal in the state of the spleen, before quinine was given. In 122 patients who took sulphate of quinine in average and daily doses of a gramme (15½ grains) for several days, the spleen always became greatly enlarged: and the same happened with some who had taken no quinine. The enlarged and softened organ exhaled an odour resembling that proceeding from the marshes.

From his observations, Dr. Rochard concludes that—1. The spleen is not the starting point of intermittent fevers. Like all internal organs, it may be congested: and very often its volume, instead of being enlarged, is notably diminished.

2. The frequent increase in size of the spleen is due to its spongy tissue permitting it to become more gorged with blood, under the influence of febrile congestion.

3. Sulphate of quinine does not always diminish the size of a congested spleen.

4. The individual varieties which the size of the spleen presents in man or in animals, in health or in disease, prevents us from appreciating in an exact manner the influence of sulphate of quinine or chloride of sodium in diminishing its volume.

5. Antiperiodic remedies arrest the febrile attacks, not by diminishing the size of the spleen, but by modifying, in a special manner, the economy in general. This modification brings about a state of reactionary equillibrium, under which the miasmatic influence is eliminated from the body.—*Ibid.*

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*Obstinate intermittent coryza—instantaneous cure.* By Dr. A. MENUDIER.—A lady, aged 24, had been for some years subject to severe attacks of coryza, coming on twice or three times in a week, and lasting from twelve to thirty-six hours. On one occasion, she was anxious to have the disease arrested immediately. M. Menudier thereupon applied a sinapism from the scapulæ to the loins: in a quarter of an hour, the coryza began to diminish, and in three quarters of an hour the patient could no longer bear the mustard. The skin was reddened; but the coryza was cured; and had not returned at the end of three months.—*Ib.*

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## OBSTETRICS.

*On Abdominal Tumors during Pregnancy.* By DR. MORISSEAU.—On two occasions, Dr. Morisseau writes, I have had an opportunity of observing the result of abdominal tumors during pregnancy. More recent facts have awakened my recollection, and fixed my attention.

A woman, aged 28, married for eight months, had become pregnant four months after marriage. For several years she had had a swelling on the right side of the abdomen. It was painless and moveable, offering no impediment to the functions of the abdomen; but it now became adherent and painful. In the seventh month, the woman died of marasmus. For a month before her death, she had had purulent alvine evacuations; but the size of the tumor appeared very slightly diminished. The tumor was found to be filled with pus, to be adherent to the mesentery, and to have an opening into the ascending colon. The fœtus was in a state of putrefaction.

A woman, aged 30, who had had two children, became pregnant for the third time. After the second pregnancy, she had what she described as a ball in her abdomen. This tumor went on growing with the product of conception; and, in the fifth month, became so painful as to render motion insupportable. After suffering extremely for four months, in a state of marasmus, she was delivered of a small, living, skeleton-like child. Both mother and infant died a few hours after. Towards the eighth month of pregnancy, I perceived a tumor of the size of the head of a fœtus at full term, seated in the right flank, and distinct from the uterine tumor. At the autopsy, the peritoneum was

found to contain a large quantity of sero-purulent fluid, with albuminous flocculi floating in it. The small intestines were mottled and friable. Above the right ovary, the tumor raised the intestines, and was adherent to them by the whole of its anterior surface. It was divided into cells, which, for the most part, did not communicate, and was filled with a large quantity of very fetid greenish pus. The base was at the mesentery. The uterus appeared healthy.

Some time ago I was consulted in the case of a woman, aged 24 or 25 years, who had been married some months, to determine whether she could, without danger, become pregnant. She had for some years had an enlargement in the abdomen. The tumor was of the size of a large orange, painless, and could easily be moved from the right side, its ordinary position, to the left. I expressed my opinion that pregnancy would be attended with severe accidents; but different advice was given by another *confrere*, and the patient became pregnant. A month after conception, the tumor became painful, and larger. Towards the end of the second month the patient was obliged to remain in bed; not the least pressure could be borne; obstinate vomiting and colic set in; and, for ten days, the patient was in a most precarious state. On the seventieth day of pregnancy she expelled the fœtus. For a month she remained dangerously ill, but at length became slowly convalescent, the tumor remaining large and tender.

These facts are worthy of attention. Pregnancy necessitates increased activity of circulation in the uterus and the neighboring parts. When the uterus is developed, it impedes the flow of blood, as is proved by œdema, and varices in the lower extremities. In the abdomen, too, there is a plethoric state of the organs; hence, if a ganglion is already hypertrophied, or there be a tumor of any kind in the abdominal cavity, it will be liable to become enlarged.

Is it, then, prudent to advise marriage to a female who has a tumor in the abdomen? I have not hesitated, and would not hesitate, to reply in the negative.—*Lond. Journ. of Medicine.*

## SURGERY.

*New Mode of Reducing Strangulated Hernia.*—Dr. Wise makes the following interesting communication in a letter addressed to Professor Syme:—

"The following are the particulars I promised to send you, regarding a new method of reducing strangulated hernia. While I had charge of an hospital in India, an elderly man was brought to it with a strangulated inguinal hernia. After in vain employing the usual means of reduction, I was preparing to liberate the gut with the knife, when a Mussulman gentleman suggested that the following method should be first tried, as he had seen it successful. As it appeared most simple and effective, I at once proceeded to try it. The patient was placed upon a table, and a long sheet, folded several times on itself, was carried round the lower part of the abdomen of the patient, was twisted on itself

in front, and again on the sides, so as to enable an assistant, standing on each side of the patient, to hold the extremities of the sheet, and to pull them gently upwards, or towards the patient's head, while a third assistant held the feet steady, and the surgeon used the taxis.

"As the gut immediately above the strangulated portion was superficial and distended with air and liquid, it was drawn upwards with considerable force from the hernial sac, which was assisted by the surgeon using the taxis; when the strangulated portion was immediately reduced.

"This simple method may, in a very large proportion of cases, be employed with perfect safety and at an early period, before inflammation and thickening has complicated and increased so much the danger of the operation, which is thus rendered unnecessary."—*Ibid.*

## MATERIA MEDICA AND THERAPEUTICS.

*On the Action of Chloroform.* By M. HERVEZ DE CHEGOIN.—M. Hervez de Chégoin thinks it probable that chloroform may in some cases exert a deleterious influence on the organs, short of death; and he relates a case of amputation of the thigh, in which anæsthesia was produced, and in which both the mucous membrane and the divided surface of the muscles presented a blue appearance. The bone became denuded of periosteum, the suppuration became unhealthy, and the patient died. He would not, however, give up the use of chloroform; but would employ it until the patients manifested a desire to remove themselves from its influence, pushing it away with the hand, at the same time that they have a noise in the ears, and they feel a pinch but obtusely. He has operated on several occasions under these circumstances, the patients not being aware of the operation.—*Ibid.*

## CHEMISTRY.

*On the Use of Barium, Cadmium and Nickel in Pharmacy.*—Barium and its compounds, more particularly the chloride of barium (which, by the bye, has been struck out of the text of the new *Pharmacopœia Londinensis*, and merely placed among the tests in the Appendix,) is just now attracting the attention of physicians, as applicable to those diseases in which the iodides of iron and of potassium, and the tincture of sesquichloride of iron, have been administered with such decided advantage.

The salts of two other metals are likely to come into considerable use as articles of the *Materia Medica.* The metals alluded to are Cadmium and Nickel, of which the sulphates have been lately employed with advantage by some distinguished physicians, as serviceable therapeutic agents, more particularly, it is said, in some diseases peculiar to females.—*Ibid, from Annals of Pharmacy.*

THE

# MEDICAL EXAMINER,

AND

## RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. XCIII.—SEPT., 1852.

## ORIGINAL COMMUNICATIONS.

### *Experimental Researches applied to Physiology and Pathology.*

By E. BROWN-SÉQUARD, M. D., of Paris.

(Continued.)

#### VII.—ON THE CAUSES OF THE TORPIDITY OF THE TENREC, (*Erinaceus ecaudatus*, Linn.)

The influence of cold as a cause of hybernation has not been considered essential, on account of an assumed fact, which is altogether incorrect. This fact is that a mammal called the Tenrec, (*Erinaceus ecaudatus*, Lin.,) which lives in the Islands of Mauritius, of Madagascar and Bourbon, is torpid under the joined influences of warmth and dryness. Cuvier says, about the Tenrec: "They are nocturnal animals, remaining in lethargy three months each year, although they inhabit the torrid zone. Moreover, Bruguiere asserts that it is during the time of the greatest heat that they are torpid." Physiologists have admitted this fact as true, and they have supposed that warmth and dryness could be, like cold, a cause of torpidity.

The following facts prove that the torpid sleep of the tenrec takes place from precisely the same cause as that of the hedge-hog, (*Erinaceus Europeus*, Lin.,) and of other hybernating mammals:

1st. The tenrec and the hedge-hog belong to the same family, and they are much alike.

2d. According to MM. Desjardins, Telfair and Coquerel, and to my own observations, the tenrecs earth themselves, and are torpid from the month of June to the month of November, *i. e.* during the winter season of the Islands where they live.

3d. Hybernating animals, belonging to varied species, observed by Pallas, Mangili, Marshall Hall, Berthold, Barkow, and myself, have been found torpid at the temperature of 61 to 66° F., (16 to 19° Cs.) Moreover, I have found that dormice, (*Mus glis.*, Lin.) even at a temperature of 68 to 72° F., (20 to 22° Cs.) may become torpid, and I have observed some that were constantly sleeping, during a whole week, at a temperature varying from 59 to 68° F. (15 to 20° Cs.) I have stated that hedge-hogs may be torpid during the summer; in Paris, at a temperature of 68 to 72° F., (20 to 22° Cs.) and lately, in Philadelphia, I have seen a marmot (*Arctomys monax*, Buff.) torpid, in June, at a temperature of 71 to 73° F. (21.5 to 23° Cs.)

4th. During the time of its torpidity, the tenrec is under the influence of a temperature of 59 to 72 or 73° F., (15 to 22 or 23° Cs.) rarely more, and sometimes less. Therefore these animals are exposed to a temperature sufficiently low to render them torpid, for that temperature may produce that effect on the hybernating animals of cold countries.

From these facts I believe it is right to conclude that torpidity is induced in the tenrec, in the same way as in the other hybernating mammals, and therefore it is not necessary to suppose that warmth and dryness produce torpidity.

## VIII.—ON THE INFLUENCE OF POISONS UPON ANIMAL HEAT AS A CAUSE OF DEATH.

Prévost and Chossat, and after them, M. Magendie, have ascertained that death occurs quickly in mammals when their temperature is notably diminished. My experiments confirm

the correctness of that statement. The diminution of animal heat in mammals, is so dangerous that, in one case, I have seen death take place in a rabbit after a diminution of only 22° F. (12° Cs.) I have never observed any animal continuing to live when I had diminished its temperature more than 44° F. (24°.5 Cs.) I have found the law established by Chossat perfectly correct, according to which the diminution of animal heat necessary for killing is less and less, in proportion to the rapidity with which that diminution takes place.

It is very probable that in all the cases where, in consequence either of disease, or of a wound, or of poison, the temperature of man is diminished many degrees, his life is in danger from the very fact of that diminution. It is thus in cholera, in sclerema, in certain cases of palsy, in cases of great disturbance of the respiration, in fractures and luxations of the vertebral column, in the cervical, and even in the dorsal regions, in cases of profuse hæmorrhage, and in many cases of poisoning when death is not rapidly produced.

It has been long known that temperature is diminished in poisoned persons; and there are but few cases of poisoning on record in which it is not said that the patient was cold. Chossat has found that a dog, into whose veins he had injected opium, had its temperature diminished from 105° to 62.6° F. (40°.3 to 17° Cs.), 22 hours after the injection. Brodie has found that many poisons act upon animal heat so as to diminish it considerably. Demarquay and Duméril, junior, and later, these two experimenters, joined with Lecointre, have found the same thing as Brodie in many toxic agents. I have made very numerous experiments on this subject, and some of their results have been published before the last papers of Demarquay, Duméril and Lecointre.*

I have stated that many poisons, either injected in the veins or absorbed by the vessels of the skin or of the digestive canal, may diminish sufficiently the temperature of Guinea pigs and rabbits, to produce death. This occurs when the dose of the poison is not large enough to kill in less than four or five hours. These poisons may kill only by their action upon

* See Gaz. Med. de Paris, 1849, t. iv., p. 644.

animal heat. It may be so with opium, cyanhydric acid, the cyanide of mercury, hyoscyamus, digitalis, belladonna, tobacco, euphorbia, camphor, alcohol, acetic, oxalic, sulphuric, azotic, chlorohydric acids much diluted, and some oxalates.

Of course the action of these poisons is the greater, the colder the atmosphere; but it is not always immediately so, and instead of diminishing the animal heat, many may increase it for a time, especially when the temperature of the atmosphere is elevated.

I have discovered that a dose of one of these poisons, sufficient to kill an animal, when there is no obstacle to the diminution of its temperature, may be unable to destroy life when the temperature of the animal is maintained by artificial means to its normal degree, or not far from it. My experiments have been conducted as follows:

Equal doses of poison were given, simultaneously, to two animals, as much alike one another as possible. One of them was left in a room at a temperature of from 46 to 50° F. (8 to 10° Cs.), and the other was kept not far from a chimney, in a place where the air was at from 75 to 86° F. (24 to 30° Cs.) The first was dead after a certain number of hours, or sometimes one or two days, having its temperature much diminished. The other, on the contrary, had no perceptible diminution of its temperature, and was generally cured very soon. Therefore, when taken in certain doses, many poisons may kill only by their influence on animal heat, and physicians, in cases of poisoning, should try as much to prevent the diminution of temperature, as to expel the poison or to act against it by an antidote, by pulmonary insufflation, or otherwise.

In experiments which I have made lately on the action of very pure digitaline, that had been prepared by M. Quévenne, the celebrated chemist, who has made such interesting and accurate researches on digitalis and the substances of which it is composed, I have found that this poison may also diminish temperature. I believe it is easy to explain the contradiction existing between Traube and Stannius, as regards the influence of digitalis on animal heat. When the atmosphere, in which the animal is, is cold, then its temperature may be diminished by digitalis or digitaline, but when it is warm the diminu-

tion does not take place, or it is very small. But, of course, if the dose is sufficient to kill very quickly, then it is indifferent whether the atmosphere is cold or not, because there may be not time enough for the diminution of the temperature of the animal.

I have to relate another fact which, I believe, ought to be considered as analogous to the preceding. It is that kind of poisoning which occurs when a layer of oil, of varnish or of gelatin, is put on the skin of a warm-blooded animal. Death, then, is very probably produced by a substance unknown until now, and which is secreted by the skin. The layer of oil, varnish, or gelatin preventing that secretion taking place, that unknown substance becomes accumulated in the blood, and then are produced the phenomena so well studied by MM. Fourcault, Becquerel, Breschet, and Magendie. I have found that in such a case the animals may live, if the atmosphere in which they are kept is at a temperature inferior to 79 or 80° F. (26 or 27° Cs.) In these circumstances their temperature is not sensibly diminished, while it diminishes much when the atmosphere is cold. Therefore it is especially by their loss of warmth that animals are killed, when their body has been entirely covered with oil, varnish, or gelatin.

## IX.—ON CERTAIN ACTIONS OF COLD, WARMTH, AND LIGHT UPON THE CRYSTALLINE LENS.

Pourfour du Petit has discovered that after the death of a mammal, it is not uncommon to find the crystalline lens opaque. He has found also, that when the lens has become opaque, if we draw it near the flame of a candle or a lamp, it becomes transparent again after a few minutes. The same lens, put alternately near and far from the flame, may become alternately transparent and opaque. I have endeavored to discover whether it is the light or the warmth of the flame which renders an opaque lens transparent. I have placed between the lens and the flame a layer of mineral salt, which is athermane and transparent. Then the light of the flame could reach the lens, but not its warmth. There has been no action. In another experiment I have exposed to the light passing through the mineral salt a fresh crystalline lens, still perfectly transparent. It became opaque. Now, in a third experiment, I have compared two

crystalline lenses, perfectly transparent, one exposed to the action of light passing through the mineral salt, and the other kept in an obscure place. The former became opaque much quicker, and considerably more than the other. Therefore, 1st. It is not light which renders transparent an opaque lens; 2d. Light does not prevent a transparent lens from becoming opaque; 3d. Moreover, light appears to accelerate, if not to produce, the opacification of the crystalline lens.

As to the influence of warmth, it is certain that it is that which renders transparent an opaque lens: 1st. When left in the atmosphere, at a temperature superior to 70° F. (21° Cs.), a fresh transparent lens remains transparent. 2d. When a lens has become opaque, it is frequently sufficient to keep it exposed to the warmth of the hand, during some minutes, to render it transparent. 3d. The lower the temperature of the atmosphere the quicker transparent lenses become opaque.

These experiments give a very interesting result, *i. e.*, that light appears able to produce an effect precisely opposite to the effect produced by warmth.

From these researches I conclude:

1st. That light, and a low temperature, are favorable conditions, if not direct causes, of the opacity of the lens in warm-blooded animals after death.

2d. That a warm temperature, *i. e.*, a temperature superior to 70° F. (21° Cs.) is a cause of the change occurring in the lens, by which, when opaque, it becomes transparent.

I will add, that sometimes an analogous opacity takes place in the cornea.

### X.—ON THE NORMAL DEGREE OF THE TEMPERATURE OF MAN.

The degree of animal heat, in the human species, is stated as being between 98.5° and 100° F. (37 and 38° Cs.) I intend to prove that it is higher.

It is impossible to take directly the temperature of most of the internal parts of the body in man; therefore many physiologists, in order to discover the temperature of these parts, have argued as follows: According to J. Hunter, the temperature of the rectum in animals is the same as that of the right ventricle of the heart; hence it has been concluded that as the tem-

perature of the rectum, in man—still according to Hunter—is 98°.42 F. (36°.9 Cs.) the temperature of the internal parts of the body ought to be between 98 and 99° F. (36°.67 and 37°.22 Cs.)

Some other physiologists, noting the temperature of the mouth under the tongue, and supposing that this temperature is nearly the same as that of the internal parts of the body, have concluded that the temperature of man is between 99 and 100° F. (37°.2 and 37°.8 Cs.)

We will prove that these deductions are not right:

Firstly, the degree of the temperature of the rectum is not, as Hunter says, 98°.4. It may be so in debilitated men, but in healthy persons it is more elevated. It is between 100 and 102° F. (37.7 and 38°.89 Cs.) according to my own researches and to those of Berger and Maunoir. Besides, many experiments on dogs, rabbits and guinea-pigs, have shown satisfactorily to myself that the temperature of the rectum is not equal to that of the right ventricle. This last organ is from 1 to 3° F. (0.56 to 1.7° Cs.) higher than the rectum.

The temperature of the rectum, in man, being between 100 and 102° F. (37°.7 and 38°.8 Cs.), and the temperature of the right ventricle, in man, being from 1 to 3° F. (0.56 to 1.7 Cs.) higher than that of the rectum, if we suppose the same difference existing in man as in mammals, it follows that the temperature of the right ventricle of the heart in man ought to be between 101 and 105° F. (38°.33 and 40°.56 Cs.)

But a closer approximation of the exact temperature of the internal parts of the body, in man, may be obtained by taking the temperature of an organ situated deeper than the rectum and, consequently, less exposed to the influence of the atmosphere. Such is the case in the bladder. I have observed its temperature by taking that of the urine at the moment of its emission and before any sensible change had occurred in it. The urine was directly received in a vase dipped into a large quantity of water at 98° F. (36°.7 Cs.) Thus I have ascertained that the mean temperature of the urine, in man, is 102°.6 F. (39°.2 Cs.)

Now if we take notice of this well-known fact, that the temperature of the lower part of the abdomen is less elevated than the upper part, we are authorized to believe that the temperature

of the central parts of the body, in man, is very near 103° F. (39°.5 Cs.)

My experiments on the temperature of urine were made on ten strong sailors, in the spring, on the Atlantic Ocean, between the 43d and 45th deg. of north latitude. The lowest degree of the temperature of urine which I have observed, was 100°.9 F. (38°.3 Cs.); the highest was 103°.2 F. (39°.56 Cs.) My own urine, examined more than thirty times, in the most varied conditions, has been nearly always at the same temperature; the variations have been only between 102° and 102°.8 F. (38°.89 and 39°33 Cs.) The ordinary degree is 102°.5 F. (39°.17 Cs.)

Long before my researches, the temperature of urine, in the human species, had been taken by some observers, but in general without sufficient care. The temperature of the urine is 94°.25, according to Braun; 98°.9, according to De Lisle; and 103°, according to Hales. Recently Berger has taken the temperature of urine in the bladder in five women. He has found it equal to 101°.48 F. (38°.6 Cs.)

As the temperature of woman is a little inferior to that of man, the result obtained by Berger is in accordance with mine.

If we take the average between the temperature of the urine of man as I have found it, and that of woman as Berger has found it, we have a number very near 102° F. (38°.9 Cs.)

From these facts we draw the conclusion that the temperature of the thoracic and abdominal viscera, in the human species and in both sexes, is between 102 and 103° F. (38°.89 and 39°.44 Cs.), *i. e.*, some degrees higher than it is generally admitted.

### XI.—ON THE INFLUENCE EXERTED UPON THE GENERAL TEMPERATURE OF THE BODY BY A CHANGE IN THE TEMPERATURE OF ONE OF THE EXTREMITIES.

The following sentence is given, as an axiom, by Dr. W. F. Edwards: "We cannot either raise or lower the temperature of any one part of the body, without all the other parts of the frame being affected and suffering a corresponding rise or fall in temperature, more or less, according to circumstances."*

* Article *Animal Heat*, in Todd's Cyclop. of Anat. and Physiol., 1839, t. ii., p. 660.

Expressed in such terms, we accept this law as perfectly true. But the author elsewhere gives an extension to this law, which we will prove to be incorrect. No doubt when the temperature of the blood, coming to the heart from a remote part of the body, has been modified in that part, the thoracic viscera ought to have their temperature modified; but to what extent? It is on this very important point that we do not agree with Dr. Edwards. He was of opinion that the influence exerted by a small part, on all the other parts of the body, was considerable. He says that the chilling of a single part, such as the hand or the foot, may cause a loss of temperature in all the other parts of the frame, even far beyond what could have been presumed as likely or possible, and that in a number of experiments where one hand was plunged in water cooled down by ice, the other hand, which was not subjected to the action of the cold bath, lost nearly 5° R. (11°.25 F., 6°.25 Cs.) in temperature.

It will be easily understood how important it would be that practitioners should be able to act on the general temperature of a patient, so as to increase or diminish it, by means of a hand or a foot bath. I regret to say that if the facts observed by Edwards are exact, his conclusion nevertheless is incorrect.

I have performed, both alone, and with the help of Dr. Tholozan, Physician of the Hospital *Val-de-Grace* at Paris, numerous experiments, with the view of knowing whether Dr. Edwards was right or not. I have found that the chilling of one hand plunged in water at the temperature of freezing point, acted very strongly on the temperature of the other hand. But, at first, there is no regularity at all in the quantity of degrees of temperature lost by the hand which remains out of the water; and secondly, we have found once that this hand did not lose any fraction of its temperature. In one case we have observed that the hand kept in the atmosphere did lose 22° F. (12° Cs.) in seven minutes. The ordinary loss of temperature has been of between 6 to 8° F. (3.33 to 4°.44 Cs.) In one case there has been only a loss of 2° F. (1°.2 Cs.) In another case there has been no loss, and, on the contrary, there has been an increase of temperature of 1°.4 F. (0°.8 Cs.)

If, like Edwards, we consider the loss of temperature of the hand not plunged in water as a sign and as a measure of the

diminution of the general temperature of the body, we must conclude, from our experiments, that the chilling of a small part of the body may be unable to diminish the temperature of the body sensibly, and that, in other cases, it may act extraordinarily upon it. But the supposition that the hand kept in the atmosphere, was able to give a measure of the modification of the body is incorrect. By taking the temperature of the mouth during the time that one hand was dipped into very cold water, Dr. Tholozan and myself have ascertained that the temperature of the body does not sensibly change. The greatest diminution of the temperature of the mouth has been nearly 1° F. (0°.6 Cs.), and this only in one case. In that experiment in which the hand not plunged in water lost 22° F. (12° Cs.), the temperature of the mouth was not diminished more than the fifth of a Fahr. degree.

As it is quite certain that the temperature of the body is constantly changing, it is easy to understand why we do not find a small but a constant diminution in the temperature of the mouth when one hand is subjected to a notable chilling. When, under the unknown influences that are constantly modifying the temperature of the body, there is a tendency to increase that temperature, then the tendency to its diminution originating from the chilling of one hand may exist without producing any effect. We have there two causes acting in opposite directions, and if they are equal they annihilate each other. If they are unequal, we perceive only the difference between them. When these two causes act in the same direction, then their efforts are added to one another, and it is probably in a circumstance of that kind that I have once found a diminution of 1° F. (0.°56C.) taking place in the mouth.

We have now to examine how the diminution of the temperature of a hand is produced when the other hand is dipped into cold water. *A priori* it is evident that the chilling of the hand kept in the air exists in consequence, either of the arrival of a cooler blood, or in the diminution in the quantity of blood. That hand being exposed to a cold air (for it is only in such a case that the experiments succeed) loses its temperature by the action of that cold air. At first the blood that arrives in the hand is not cooler, as Edwards had supposed it was. This we prove by the

fact that the temperature is but very little changed in the mouth. The supposition then remains that the quantity of blood arriving in the hand is smaller than usual. This may happen by two modes, one of which is that the heart sends less blood, and the other that the blood-vessels of the hand are contracted and prevent, in part, the passage of blood. It is certain that the heart continues perceptibly to send the same quantity of blood. Therefore we are induced to admit that the hand's blood-vessels are contracted. But now what is the cause of that contraction? We will try to show that it is in an action of the nervous system. Every one knows that under the influence of a sensation or of emotion, the hands, and sometimes the feet, become cold. The nervous system, in consequence of that sensation or emotion, acts upon the blood-vessels and excites them to contract. The calibre of the visible vessels is sensibly diminished. The same phenomena take place in the two hands when one is dipped into very cold water. An exceedingly violent pain is felt, the nervous centres are strongly excited, and they act then as under the influence of an emotion. Dr. Tholozan and myself have observed that the greater the pain felt, the more the temperature was diminished in the hand left in the air.

As to the influence of partial heating Dr. Edwards relates the following experiment:

"The hand being immersed in water heated to the temperature of 34° R. (108°.5 F.—42°.5 Cs.) rose one degree of the same scale, and the temperature of other remote parts not immediately exposed to the influence of heat were found to have risen to a corresponding degree."

I have repeated this experiment of Dr. Edwards, and I have found no evident elevation in the temperature of remote parts, as the mouth and the hand, not immersed in water.

I conclude, then from the facts contained in this note, that, in general, the temperature of the body is not sensibly modified by the chilling or the heating of a small part of the frame.

XII.—ACTION OF COLD ON THE COAGULABILITY OF BLOOD, AND PERSISTENCE OF LIFE IN FROGS AFTER LOSING HALF OF THE VENTRICLE OF THE HEART.

Dr. Marchal (de Calvi) and other physiologists, have recently asserted that cold diminishes the quantity of fibrine and conse-

quently the coagulability of blood. I have observed a curious fact, which shows that blood may possess a very great coagulability although exposed to the action of cold. I have found that after the removal of the half of a ventricle, in frogs, the blood may coagulate at the surface of the wound and the animal may continue to live. After the mutilation has been made, the lips of the wound are drawn upwards and inside in consequence of the muscular contraction. The blood flows very abundantly, but its coagulation quickly begins, and a layer of solidified blood is soon formed on the entire surface of the section, and by this process the wound is rapidly obliterated. The hemorrhage has been frequently stopped in a few minutes.

This experiment is successful only in cold seasons, probably because the batrachia are able to bear much better a loss of blood at a low than at a high temperature. The pulsations of such mutilated hearts continue with regularity and strength, but the impulse given by the remaining of the ventricle ought to be diminished. Nevertheless the circulation of blood is accomplished well enough to allow the animal to live many months.

I have shown to the *Société de Biologie* at Paris, two frogs on which the wound of the heart was cicatrised after fifteen days.*

### XIII.—ON A SINGULAR CASE OF ANIMAL GRAFT.

Every one knows the experiments by which the cock's spurs or many other animal textures have been grafted on the body of an animal, and especially on a cock's comb. I have succeeded in grafting the tail of a young cat on a cock's comb. I performed this experiment in France in 1850.

After having divided the tail of a young cat, I made a longitudinal section on a cock's comb, and I united these two parts one to the other, by stitching the cut surface of the cat's tail to the cut surface of the cock's comb. The skin of the cat's tail had been turned a little over itself, so that its internal surface was in contiguity with the cut surface of the cock's comb. Eight days after, I punctured the skin of the tail at a distance from the cock's comb, and blood escaped, so that it was evident that circulation was already established. The tail had been cold during

* See Gaz. Méd. de Paris, 1850, t. v. p. 169.

all the day of the operation, but it became warmer gradually from the second day. The union appeared much advanced on the third or fourth day. The tail was entirely fixed on the eighth day.

Unfortunately, on the eleventh day, the cock had a fight with another cock, and the cat's tail was torn out from the ground on which it had been fixed. I was thus deprived of the opportunity of knowing what transformations should have taken place in the tail.

By examining it I found that all its tissues were fresh, and that its blood-vessels contained blood.

## XIV.—ON A CONVULSIVE AFFECTION PRODUCED BY CONSIDERABLE INJURIES OF THE SPINAL CORD.

I have discovered that a very violent convulsive affection is the constant result of a considerable wound of the spinal cord, in certain animals. It is more especially in guinea-pigs in whom a transversal section of a lateral half, or a complete section of the spinal cord has been made, that this is the case.* The section was made at the level of one of the last six dorsal vertebræ or the two first lumbar.

When the convulsive fit begins, the muscles of the face and neck are the first which contract. The convulsions occur alternately in all the muscles of the eye, the face, the tongue, the jaws and the neck; so that the cause of these movements ought to act on the parts of the encephalon, from whence the facial, the trigeminal, the hypoglossus, and the motor nerves of the eyes originate. The head of the animal is alternately bent on both sides of the body, and lastly the limbs are agitated in every direction. In the case of a section of the lateral half of the spinal cord, in the lumbar region or at the end of the dorsal region, three limbs only are strongly convulsed; the two anterior and one of the posterior—the one that is on the side of the body opposite to the side of the section of the spinal marrow. The other posterior limb has only very slight movements. When the spinal cord has been entirely divided in the dorsal or lumbar regions, the two anterior limbs only are convulsed, with the muscles of the face and neck. These con-

* See Gaz. Med. de Paris, 1850, t. v. pp. 651, 895.

vulsions may come without any exterior excitation; but it is very easy generally to provoke them by frightening the animal, or by pinching, burning or otherwise exciting it. The part of the body upon which a mechanical excitation acts more powerfully is the skin of the face or the neck. This convulsive affection has a great analogy with epilepsy; but it has also some distinctive features,—for instance, the animals, during the convulsions, do not appear to lose their consciousness, and they frequently cry when they are pinched.

The affection begins generally eight, ten or twelve days after the spinal cord has been wounded. The convulsions then are not very strong, and it is usually four or five weeks after the operation that the fits are violent and easily produced. Three or four months after, the violence and frequency of these convulsions are diminished; yet in two or three instances they have increased in strength and frequency more than a year after the operation. The affection may last a long time: in one case it still existed two years after the operation.

Generally the fits last from five to fifteen minutes. The stronger they are the shorter is their duration. For an hour or two, and sometimes for one or two days after a violent fit, it is impossible to produce another one by any kind of excitation. When a fit takes place a short time after a violent one, it is always weak or very short.

I have made the following experiment on some guinea-pigs having this convulsive affection: I put them in a small box, so that they had but little room to move, and I gave them food in great abundance. They then ate very much and were deprived of exercise, and, in consequence of that mode of living, they had exceedingly frequent convulsions. One of them had a fit nearly every quarter of an hour. These fits sometimes were strong, but they did not last long. The others had fits three or four times every day. I changed their mode of living, and put them all in a large room where they had only a small quantity of food. The influence of this new regimen was nearly immediate; the same day the number of fits was diminished, and in the course of the third week afterwards they had only one or two fits; and before long some of them were cured.

I must relate also a very interesting fact analogous to the

preceding. In several guinea-pigs and frogs, which had the spinal cord transversely divided, I have observed that when the animals remained very quiet during many days, instead of the regular reflex movements, they had a violent tetanic convulsion in their posterior limbs, when the skin of these limbs was pinched.

Such a tetanic movement never occurred in these animals when I excited the regular reflex movements every day.

I have no room in this *résumé* to try to explain the facts related; I will do it in a special paper. I will only add that all the readers of this note, who know the views of Dr. Marshall Hall about convulsive diseases, will remark how strongly the facts I have pointed out are confirmatory of these views.

## XV.—ON THE RELATIONS EXISTING BETWEEN THE ORGANISATION OF NERVE TUBES AND THEIR VITAL PROPERTIES.

It is well known that when the nerve tubes are examined in a very fresh state, their contents, the *medulla*, or *white substance of Schwann*, appear pellucid and homogeneous, and of a fluid consistence; but a kind of coagulation soon takes place in that medulla, making it easily distinguishable from the tube itself, solid, grumous and much less transparent. Water has the power of producing very quickly that kind of coagulation of the white substance of Schwann, and the more quickly the warmer it is.

It was interesting to ascertain whether a nerve-fibre keeps or loses its vital properties when its contents have been transformed by coagulation. I have performed two series of experiments in order to solve this question; one on the motor nerves, the other on the nerves of sensibility.

1st. After having amputated the two limbs of a frog, I laid bare a long portion of the sciatic nerve in both. Half an hour afterwards these two nerves were still able to act perfectly well. Then a microscopical examination of some fibres from one of these nerves demonstrated that the coagulation of the medulla had begun, but was not yet complete. Ten minutes later the nerves were still capable of acting, and the microscope showed that the coagulation was complete. A similar experiment repeated a great many times has always furnished the same result.

2d. After having divided the two sciatic nerves, not far from the knee-joint, in a living frog, I have dipped the central part of these nerves into water. After a few minutes, some fibres taken from one of them were beginning to coagulate; yet these nerves possessed their sensibility. Ten minutes after, there was a complete coagulation of the medulla, while the sensibility was very little if at all diminished.

I draw from these facts the conclusion that nerve-fibres are capable of acting nearly as well when their contents are coagulated, as when they are still liquid.

This result appears to be important, inasmuch as it contributes to show that the white substance of Schwann has not a great part in nervous action. Three reasons concur in demonstrating that the essential part, the truly active one—that which possesses the vital properties—is not the white substance of Schwann:

1. We see that the vital properties of the nerve-fibres do not appear altered, although there is a very material change in this substance when it coagulates.

2. If such a change as that which takes place in this substance when it coagulates, existed in a part possessing the vital properties belonging to nerves, there should certainly be a movement or a sensation accompanying it, and yet there is none. This material change is certainly more considerable than the change effected by a slight mechanical or galvanic excitation, which is capable of producing a movement or a sensation.

3. The microscope has already proved that the white substance does not exist in all the nerve-fibres, and that it is wanting, for instance, in the very fine fibres.

Therefore if it be not the white substance of Schwann which is active in the nerves, and as it is not the *cylinder axis* which possesses the vital properties of the nerves, because it is wanting in many fibres, it results that it is the membranous layer, the paries of the nerve-tube, to which these vital properties belong, unless there is another substance, still unknown, and existing in the tubular canal of the nerve-fibre.

## XVI.—ON THE PERSISTENCE OF LIFE IN ANIMALS DEPRIVED OF THEIR MEDULLA OBLONGATA.*

I. There is no part in the nervous system considered as more essential to life than the medulla oblongata. In the last few years many German physiologists have asserted that this nervous centre is the source of the rhythmical movements of the heart. Besides, an eminent physiologist maintains that in the medulla oblongata a small part exists which is the focus of vital power. Moreover, it is certain that the medulla oblongata has a great share in the respiratory movements. Therefore it seemed probable that the ablation of such an organ, even in cold-blooded animals, ought to be speedily followed by death. Such is not, however, the result of that operation; and in favorable conditions, the batrachia, for instance, can live more than four months after the loss of the medulla oblongata. During all that time, these animals, in appearance remain in good health, and I have observed in them the existence of all the following functions and properties:

1. The circulation of blood continues as well as in unmutilated frogs. The beatings of the heart are at first quickened generally during half an hour, an hour or an hour and a half, after the operation; they then return to their normal rhythm, and they are found as regular and vigorous in frogs deprived of their medulla oblongata, for several days or even several months, as in healthy frogs. Sometimes, particularly when the hemorrhage has been considerable, the beatings of the heart become less numerous and less energetic; then the animal dies very quickly, but if it lives, the movements of the heart resume before long their normal rhythm and strength.

2. The pulsations of the four lymphatic hearts take place as in healthy frogs.

3. Digestion seems to be carried on as well and as quickly in frogs without medulla oblongata as in healthy frogs. I have ascertained this fact by introducing pieces of earth-worms into the stomach of these animals, and by studying the changes produced in these aliments during their passage along the digestive canal. Although very slow, chymous transformation, absorption and the production of fæces took place.

* See the Bulletin de la Soc. Philomatique. Paris, 1849, p. 117.

4. The products of the gastric, intestinal, biliary and pancreatic secretions being very useful, if not essential to digestion, it is very probable that these secretions exist.

5. The urinary secretion and also the production of cutaneous and intestinal epithelium, are performed as usual.

6. The pulmonary respiration ceases, but the cutaneous respiration is continued. The absorption of poisons by the skin and by the mucous membranes exists as in healthy frogs.

7. The reflex faculty is energetic, and so much so that the frogs deprived of the medulla oblongata can raise by a reflex action, greater weights than healthy frogs. As reflex movements exist, I need not say that muscles and nerves have kept their vital properties. It is frequently found that the spinal cord, especially in the *rana temporaria*, becomes so excitable that the slightest irritation of the skin is followed by tetanic convulsions.

8. The galvanic current of muscles not only exists in frogs deprived of medulla oblongata, but appears to be stronger.

From these facts it results clearly that frogs, deprived of their medulla oblongata, are in full life. It is so much so that if they are compared to frogs possessing that nervous centre, they resist etherisation longer, and also live longer after the ablation of the heart.

II. The greatest differences exist in the duration of life, after the removal of the medulla oblongata, in animals of different species, as will be seen in the following table, where the maximum duration of life is indicated in sixty different species of animals:

| Classes. | Species. | Duration of life. |
|---|---|---|
| Amphibia. | Salamanders . . . | More than 4 months. |
| | Frogs . . . . . | |
| | Toads . . . . . | 4 to 5 weeks. |
| Reptilia. | Tortoises . . . . | 9 to 10 days. |
| | Snakes . . . . | 6 to 7 days. |
| | Lizards . . . . | 4 to 6 days. |
| Fishes. | Eel . . . . . | 6 days. |
| | Pike, carp, tench, eel pout, barbel | 3 days. |
| | Perch, gudgeon and others . | 25 to 40 hours. |

| Classes. | Species. | Duration of life. |
|---|---|---|
| Birds. | Sparrowhawk (newly born) . | 21 minutes. |
| | Magpie do. . | 19 minutes. |
| | Sparrow do. . | 17 minutes. |
| | Sparrow, yellowhammer, linnet, pigeon, fowl, duck, pintaw, partridge, moor-hen, turtle-dove (adult) | 2¼ to 3 minutes. |
| Mammals.* | Dormouse (during hybernation) | 29 hours. |
| | Hedgehog ditto | 23 hours. |
| | Bull-dog (newly born) . . | 46 minutes. |
| | Cat ditto . . | 41 minutes. |
| | Rabbit ditto . . | 34 minutes. |
| | Guinea-pig ditto . . | 6 minutes. |
| | Dormouse and Hedgehog awaken in summer . . . . | 4 minutes. |
| | Cat, rabbit, guinea-pig and dog (adult) | 3 to 3¼ minutes. |

The preceding table shows that after the removal of the medulla oblongata, in different species of animals, the duration of life may be reckoned by *months* for batrachia, by *weeks* for some reptilia, by *days* for other reptilia and for fishes, by *hours* for hybernating mammals, and by *minutes* for birds and non-hybernating mammals.

III. After the removal of the medulla oblongata, the most remarkable differences in the duration of life, in different individuals belonging to the same species, may occur in consequence of differences of temperature. The lower the temperature the longer is the duration of life. Thus, the duration of life in frogs may be reckoned by *months* when the temperature is between 32° and 46° F., (0 and 8° Cs.); by *weeks* when it is between 40° and 55° F. (5° and 13° Cs.); by *days* when it is between 50° and 65° F. (10° and 18° Cs.) by *hours* when it is between 65° and 72° F. (18° and 24° Cs.); and by *minutes* when it is between 86° and 105° F. (30° and 40° Cs.)

In the other cold-blooded vertebrata the differences in the duration of life, after the removal of the medulla oblongata, are not so great as in frogs, but the law is the same. This law exists also for warm-blooded animals, so much so that the differences existing between mammals of different ages and of differ-

* Pulmonary insufflation has been used only for the dormouse and hedgehog during hybernation.

ent species, are to be attributed, in part, to their differences of temperature.

IV. As the principal condition for a long duration of life in cold-blooded vertebrata is a cold atmosphere, and as the vital phenomena taking place in these animals are much diminished when they are exposed to a low temperature, some physiologists have supposed that the persistence of life for many weeks or more, was equivalent, as regards the sum of the vital phenomena, to a duration of some hours in summer, when these phenomena have a great activity.

In answer to this objection I will at first call the reader's attention to the fact that, in batrachia, deprived of the medulla oblongata, and exposed to the action of a low temperature, the heart beating, on an average, 35 times in a minute and life lasting four months—*i. e.* 172,800 minutes, it follows that, during that time, the heart has more than 6,000,000 pulsations. In summer, the maximum duration of life having been six hours—*i. e.* 360 minutes, and the heart beating, on an average, 45 times in a minute, it results that, during that life, the heart has only 1,600 pulsations—a number which is to the other as 1 is to 375.

This comparison shows how incorrect it is to suppose that in consequence of the diminution of the vital phenomena in cold weather, a batrachian that lives several months does not live more than another living only several hours in summer.

This opinion is also proved erroneous by the facts which I have already related, and which show that all the functions and vital properties existing in frogs deprived of their medulla oblongata, appear to be as active as in unmutilated frogs. No doubt that there is a notable difference between summer and winter as to the activity of vital phenomena in frogs, but if we suppose that these phenomena are in winter only the tenth of what they are in summer, and if we consider, consequently, the duration of life in winter as being only the tenth of what it is, we shall have, nevertheless, a duration in winter forty or fifty times as great as the duration in summer.

V. Now I have to examine why, in summer, the life of cold-blooded vertebrata, deprived of the medulla oblongata, is much shorter than in winter.

The principal cause of this difference is in the fact that the

cutaneous respiration, (it is known that the pulmonary respiration does not exist in animals deprived of the medulla oblongata,) which is sufficient as long as the temperature is very low, becomes more and more insufficient, when the temperature becomes more and more elevated. So that the same law exists for the cold-blooded vertebrata deprived of their medulla oblongata, and for those which are not mutilated. The following experiments concur to demonstrate the correctness of this view:

I have found that frogs deprived of their medulla oblongata live much longer when placed in oxygen than in atmospheric air. I have made two series of experiments—one in June, 1847, the other in July, 1850. In both series the frogs were put immediately after the operation, under a receiver full of oxygen. They lived from eight to fourteen days at a temperature at which life, in atmospheric air, is always shorter than six hours. The temperature was from 64° to 84° F. (18° to 29° Cs.) These frogs would have lived longer if the quantity of oxygen had been more considerable.

By pulmonary insufflation I have maintained life in tortoises deprived of the medulla oblongata, much longer than when insufflation is not used. The duration of life was 7, 12, 13 and 17 days in four insufflated tortoises. When death occurred in these four animals, they had been left without insufflation more than five or six hours, and very likely they would have lived longer had they been insufflated more frequently. In four non-insufflated tortoises life lasted 3, 7, 19 and 23 hours. These comparative experiments were made in summer in a temperature varying from 64° to 86° F. (18° to 30° Cs.) The insufflated tortoises lived longer in summer than non-insufflated tortoises in winter.

From all these facts it is evident that in animals deprived of the medulla oblongata, death is principally caused by insufficiency of respiration.

(To be continued.)

*On Dysentery.* By GEORGE S. UPSHUR, A. M., M. D., Fellow of Medical Society of Virginia; Member of the American Medial Association, &c. Norfolk, Virginia.

So much has been written upon dysentery, not only in the systematic works on Practice, but also in the various Medical Journals, that doubtless little is left to be said that has not already been said upon this subject. I do not propose, therefore, in this article, to write a treatise on this subject, nor to enter with any degree of minuteness into its causes, symptoms, or pathology, but simply to examine, as briefly as possible, the value of the many remedies that have from time to time been zealously urged upon our attention and to illustrate the whole, as far as my own experience goes, by the history of a few cases taken from every day practice.

Dysentery may be called a genuine *cosmopolite*, for it is confined to no fixed locality. Indeed, so common is the affection, that no physician, who has any business at all, fails to see it every week in the year. While it very frequently prevails as an epidemic, particularly amongst those who are subject to sudden vicissitudes of weather, and are accustomed to unwholesome food and ill-ventilated apartments, it cannot be said to be confined exclusively to any particular class or condition, but frequently attacks the high and the low together, and is found often as difficult of management in one as the other.

The most prolific *cause* of dysentery is undoubtedly a want of balance between the functions of the skin and the mucous surface of the bowels. No question in pathology is better established than that the skin is closely allied in its healthy and diseased action, to the intestinal mucous membrane, and indeed to all the mucous membranes, and that they frequently perform a vicarious part towards each other. Hence a cessation of the normal secretion from the skin is almost invariably followed by a congested state of the mucous surfaces, amongst which the mucous membrane of the intestines bears a conspicuous part. Sudden exposure then to drafts of cold air, when the patient is over-heated and sweating freely, is very apt to give an attack of the dysentery—especially if he should be much

fatigued at the time. Irritating ingesta, unripe and acid fruits, and drastic cathartics are also frequent causes of the disease. I have also seen the disease produced in a number of instances by the too free use of capsicum, either as a condiment, or exhibited, combined with quinia, in intermittent fever.

Dysentery is one of the few frank, open inflammations of an inportant organ that does not make its attack by rigors. *Sometimes* it is ushered in by decided chill, but generally it comes on gradually;—at first there is simple looseness of the bowels, the dejections being large, semi-fluid, and accompanied with only a little griping pain along the track of the colon. These symptoms, however, are soon followed by fever, thirst, and nausea, with small and very frequent discharges of pure blood, or bloody mucus, and pain and straining at stool—these last symptoms often continue for several days after the fever has subsided and the appetite has returned. The disease is then apt to run into the chronic form, from which result ulceration of the bowel and a hypertrophied condition of the mucous membrane, which is very troublesome to the patient, and difficult of management.

The *pathology* of the disease is embraced in the simple remark that it is an inflammation of the *mucous* coat of the large intestine. When the muscular tunic and peritoneum are involved, it is to be considered merely a complication, *and no part of the disease proper.*

### *Treatment.*

*Blood-letting.*—There are few cases of dysentery,—I do not speak now of the epidemic disease,—that do not require the *free use* of the lancet, if the patient is seen within the first five days after the attack. The state of the pulse is here of less value than in any of the phlegmasiæ, and indeed scarcely to be consulted in reference to the propriety of taking blood, *if the tormina, tenesmus, and frequent bloody or mucous stools* are prominent symptoms. It is well known that the pulse is rarely found to be full, hard and bounding, in inflammation, however acute, of the mucous membranes—on the contrary, it is apt to be small, frequent, and very compressible, especially in inflammation of the mucous coat of the bowels, and therefore is well cal-

culated to mislead, if relied on solely, as is too often the case, to decide the question of blood-letting. The immediate and intimate connection of the bowels with the most important nervous centres—their abundant supply of blood-vessels, and the indispensable part they perform in the economy, would lead us to conclude, *a priori*, that, when inflamed, the force of the heart's action, and indeed all the vital powers would be depressed in a marked degree. And we find this to be the case in every day practice, but such depression should never deter us from the free use of the lancet, if other symptoms call for it. I would lay down the rule, then, that in all cases of dysentery in which there are frequent, small, bloody, or muco-bloody stools, accompanied by distressing tormina and tenesmus, if seen early, general bleeding *as far as the patient will bear it*, is absolutely demanded, no matter if the pulse does *seem* to contra-indicate it. We have only to reflect for a moment that we have here acute inflammation of an important organ, which it is necessary to arrest as soon as possible, and that the lancet is the great agent in the relief of all acute, frank inflammations, to be convinced of the propriety of the rule, without reference to the temporary depression of the pulse, produced by the intensity of the disease. I dwell upon this subject because I deem it of vital importance in the treatment of dysentery. I can call to mind at least half a dozen cases of death from this disease, in the commencement of my practice, which, after reflection, convinces me might possibly have been saved by copious blood-letting. The condition of the pulse alone guided me, without reference to other and more important symptoms. Doubtless many of my medical brethren have frequently committed the same blunder. In the treatment of disease, no single symptom, however important in itself, ought to be permitted to control the judgment of the physician. Yet how often does the pulse sit as judge and alone decide questions in therapeutics from which it would be considered by some the height of rashness to appeal.

After general blood-letting, the application of leeches or cups along the track of the colon, or of leeches to the anus, will be found of great service—but topical depletion should never be permitted in lieu of general depletion, where this last can be resorted to. Indeed, cups and leeches are of little value

in the first stage of acute dysentery, unless preceded by the lancet.

*Mercurials.*—No agents have been more over-rated in the treatment of dysentery than mercurials. The combination of calomel, opium and ipecac. is the *alpha* and *omega* of therapeutics in this disease, with a very large and respectable body of physicians; and such is the testimony adduced in its favor that I doubt not beneficial results have *followed* its use in particular cases. I am disposed, however, to attribute the benefits to the *opium and ipecac. only*, and am satisfied from careful and ample observation, that they would have accomplished much more good without the calomel. It may be true that in the dysentery of tropical climates, where torpor of the liver is usually a complication, mercury is sometimes administered with benefit, but in the ordinary dysentery of this country I am persuaded it does more harm than good. My own observation in this regard is corroborated by some of the best authorities in medicine.

Dr. Cheyne, in 3d vol. Dublin Hospital Reports, says: "Mercury could not be depended upon, and did not relieve in numerous instances when the mouth was affected, and sometimes seemed to increase the disease."

M. Twining, who saw a vast amount of the disease in the General Hospital at Calcutta, says: "I speak without hesitation on this subject, from having too often seen the fallacy of trusting to the effects of calomel for the cure of severe acute dysentery, and having tried that medicine extensively in every form of the disease."*

Dr. Mackintosh, (*Practice of Physic*, vol. I. p. 366, 1837,) says: "My own experience in this country, as well as within the tropics, enables me to confirm the statement of Dr. Cheyne and M. Twining."

Dr. C. A. Lee, in a note to the art. *Dysentery*, in Copland's Dictionary, says: "With respect to the use of mercury in this disease, we believe that it generally proves injurious."

Dr. Dunglison says that the common remark, that if the disease proves obstinate it will yield, provided we can only 'touch the

* Vide Diseases of Bengal, by W. Twining, Esq., p. 40.

mouth' with a mercurial, does not accord with his experience. He has seen many cases in which the effect of mercury has been induced on the system, and, nevertheless, the disease has proceeded to a fatal termination. (*Practice of Medicine*, vol. I. p. 114.)

Dr. Batchelder, in the N. Y. Journal of Medicine for July 1851, confirms these statements by adding his own reliable testimony against the calomel practice.

But it is useless to multiply authorities upon this subject. I will add a case or two in illustration from my case-book:—

Case I. Was called in to see M. J. on 3d of June, 1849—a feeble man, æt. 30, who had recently been severely ptyalised from taking six grains of calomel for a slight diarrhœa. Found him with high fever, nausea, thirst, urgent tormina and tenesmus, pain upon pressure along the course of the colon, and dejections of blood and mucus every few minutes. *His gums were swollen and sore, and he was discharging saliva freely, accompanied by intense mercurial fetor.* I bled him to syncope, had him freely leeched, and administered ʒii. of Hope's Nitrous Acid Mixture every three hours. He was almost entirely well in two days.

I have no question but that calomel in this case was the immediate cause of the dysentery.

Case II. Mrs. W. a robust lady, æt. 50, was seized with simple looseness of the bowels with slight griping, June 10th, 1851. Saw her on 11th,—fever intense, pulse rapid, soft, compressible, skin dry—thirst urgent—nausea and vomiting—pain upon pressure over abdomen—bowels moved every ten minutes, with such tenesmus as to force the patient to cry out—dejections pure blood. Venesection *ad deliquium*—Laudanum enema—Hope's mixture.

12*th.* No improvement—suffering excessive—experiences some relief as long as the enema is retained—still vomiting—ordered hot fomentations. ℞. Cupri Sulph. gr. iij.; Pulv. Opii gr. vi. M. Pil. 12—S. One pill every three hours, and continue enemata.

13*th.* As yesterday—probably a little less straining at stool—applied Emp. Canth. to abdomen; continue pills.

14*th.* Symptoms not quite so urgent—less nausea and thirst,

but still suffers intensely. ℞. Calomel gr. xii. Ipecac. gr. iv. Morph. Sulph. gr. ij. M. Pil. 8—S. One pill every two hours.

15*th.* More fever, and dejections more frequent—took all the pills—stomach very irritable—pulse frequent and feeble—ordered laudanum enema, to be repeated whenever the bowels are moved.

16*th.* *Found my patient profusely salivated*, with no abatement of the dysenteric symptoms. From this time kept her upon large doses of acetate of lead and opium with laudanum injections, and occasionally a full dose of Dover's powder at night. She was well on the 22d.

These two cases taken indiscriminately from a number that have fallen under my notice, show conclusively that the mercurial impression is not incompatible with the existence of acute dysentery, and that calomel is very far from being the Magnus Apollo in the cure of this disease, which its zealous advocates claim for it.

*Saline Cathartics.*—I have prescribed a combination of Epsom and Rochelle Salts, ʒij. of each, after general bloodletting, with the happiest effects in many cases of acute dysentery—and am disposed to think very favorably of the practice. I think it is particularly applicable to cases occurring in robust persons where the tenesmus is very troublesome. Frequently have I seen this symptom entirely relieved after the copious watery evacuations produced by the saline.

*Acids.*—The nitrous acid mixture of Dr. Hope,* which was introduced to the profession in this country through the columns of this Journal, by Dr. C. D. Meigs, in 1838, is justly considered by those who have used it freely, a remedy of great value in dysentery. Among all the good things which Dr. Meigs has done for his brethren, he never did a better than calling their attention to this remedy. In my hands it has rarely failed to accomplish every thing that was desired. It is not a specific, but if fairly tried I think will less often bring disappointment than any other single remedy in this frequently intractable affection. Great care should be taken not to administer it in too small doses, an adult should not take less than ʒii. at a time, and it should be continued at intervals of three or four hours until about eight doses have been given.

*℞. Acid Nitrosi ʒi. Tr. Opii gtt. xl.; Aquæ Camph. ʒviii. M.

*Opium and acetate of Lead.*—Since the publication of Dr. Batchelder's valuable article, before referred to, I have given the acetate of lead and opium a fair trial, and am prepared to speak as favorably of the combination as Dr. B. has done. My experience with it has been in those cases chiefly where Hope's mixture failed. I usually give as the first dose, one grain of opium with four of the acetate, and then half grain of the one with two grains of the other *immediately after each evacuation*, no matter if the bowels are moved every five minutes. Usually but a few doses are taken before relief is obtained.

*Nux Vomica.*—When the intensity of the acute stage has been somewhat lessened by proper antiphlogistic treatment, and the disease seems disposed to assume the chronic form, a combination of nux vomica with ipecac and opium will be found of great service. I usually give to an adult the following: ℞. Ext. Nucis Vomicæ gr. viii. Pulv. Ipecac gr. vi. Pulv. Opii gr. x. M. Pil. 12. S. One pill three times a day. Some cases which resisted every other mode of treatment seemed to be speedily relieved by this.

*Local Remedies.*—Blisters in dysentery have generally disappointed me—applied too early, they add materially to the excitement, not only because they are decidedly stimulant, but because they annoy the patient when called so frequently to stool—apart from this, they prevent the proper examination of the abdomen by pressure. They may be of service in the latter stage of the disease, but I doubt, after all, if the benefit obtained is a compensation for the inconvenience they occasion.

*Injections of Laudanum* are valuable auxiliaries, especially when the inflammation is seated low down in the bowel and the straining at stool is urgent. Not less than two teaspoonfuls of laudanum should be given in *as small a quantity as possible* of thin starch, and repeated if it is not retained. The nitrate of silver enemeta have also been highly extolled, but they have proved valueless in my hands in the acute stage—due probably to the fact that the first impression of the caustic is irritant, which obliges the bowel to eject it before its specific effect is produced. In the chronic stage, when the mucous membrane is less irritable, lunar caustic injections will be found to answer a good purpose, especially in the case of children. This remark applies

with two-fold force to those cases where ulceration of the bowel is suspected.

*Diet.*—All medication in dysentery will prove abortive if proper attention is not paid to the regimen. Among the most important points to be observed is *not to permit the patient to take cold drinks.* I have frequently seen all the symptoms aggravated after taking a small draught of ice water, or eating a few pieces of ice. Warm sage tea answers well for the ordinary drink, usually alleviates the thirst, and is not unpalatable to most persons. Warm mucilaginous drinks, such as the gum arabic, slippery elm, &c., are also of positive service—not only because they are nourishing to some extent, but also because they shield the inflamed bowel from irritating secretions.

During convalescence the blandest food should be taken, such as arrow-root, tapioca, soft boiled eggs, &c., and these in very small quantities. I am satisfied that convalescence is often retarded, and even a relapse induced, by putting into the stomach too much even of the most wholesome food. The digestive powers are especially feeble after an attack of dysentery, and one, who has not repeatedly witnessed the fact, would scarcely believe that a single teaspoonful too much, even of the most unirritating food, will sometimes re-produce the distressing symptoms of the disease. We can not be too cautious then in reference to the *quantity* as well as the *quality* of the diet.

During the months of May and June, dysentery prevailed to a considerable extent in this city and the adjoining counties—there was scarcely a sufficient number of cases, however, to make it epidemic. The character of the disease was decidedly sthenic—the only exceptions being in those persons who had but recently recovered from measles, or whose health was impaired by an attack of fever. The lancet, leeches or cups, Hope's mixture, opium and acetate of lead, saline cathartics, and Dover's powder were used with almost uniform success in the acute stage; and the nux vomica with opium and ipecac., the vegetable astringents combined with tonics, and proper regimen, were relied on in the chronic stage. Dr. A. T. Foster, an intelligent physician of Norfolk county, informed me that he had used creasote and oil of turpentine with good result in some intractable chronic cases. He mentioned one case which well illustrates the importance of

a rigid attention to the quantity of nourishment to be given. He commenced with a single teaspoonful of milk three times a day, and was unable for several days to increase the quantity—if he gave two teaspoonfuls, for instance, the dysenteric symptoms would be increased, and he could detect in the stools shreds of coagulated milk undigested. The patient at last was able to drink a pint of milk every day. He doubtless had ulceration of the mucous membrane of the colon.

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*Successful Removal of a Foreign Body from the Knee-joint.—Anomalous Character of the same.* By J. WASHINGTON SMITH, M. D., of Croton, Del. county, N. Y.

MESSRS. EDITORS,—The following case presents so many points of interest, if not of originality, in its history and treatment, that I have thought a record of it worth preserving—and, such as it is, I now place it at your disposal.

Mr. R. M., æt. 22, a laborer on a farm, otherwise healthy, consulted me in June, 1851, in regard to a difficulty of the right knee. For some months previous something had appeared to "catch," as he termed it, in the joint while using it, causing excruciating pain, followed by inflammation, swelling, and weakness of the joint. The peculiar "catch" had only existed for a few months, but the patient says, "the joint has been a little weak and swollen at times ever since a 'wrench' it received some four or five years since, during a wrestling feat." Recently he had perceived a "loose body, something like a bean," each side of the patella, and at other points, which was freely moveable and would easily slip into the joint. At times it was readily detected, at others difficult or impossible. The knee was considerably enlarged, as from chronic thickening of the synovial membrane, and tender to the touch, in places.

*Diagnosis.*—After the above history, and manipulating the joint, so as to bring the foreign body within reach, I did not hesitate to pronounce it a case of *loose cartilage* within the joint.

The probable cause, nature, course, usual treatment, &c., were fully explained, and the patient dismissed, with the advice not to think of an operation for its removal, unless the use and safety

of the limb imperatively required it; and that efforts be made to "fix" or confine it *outside*, or else to prevent its escape from *within* the joint; also, to consult older and more experienced counsel.

At my request the patient called occasionally to report his condition, and enable me to watch the progress of the case. After a time he acquired such dexterity as to bring the foreign body outside of the joint almost at pleasure.

After September, 1851, he was not able to attend regularly to his occupation; and as the joint was becoming more thickened and stiffened, from the continued irritation to which it was exposed, efforts were made to confine the cartilage, (as I still supposed it,) by pushing it far away from the joint, in one of the synovial pouches by the side of the patella; but it was found, upon repeated trials, that it could not be retained *in situ* by any amount of pressure which could be borne, and allow any motion of the joint. Efforts were also made to *prevent* its escape from the joint, but with only partial success, while the cause of irritation was sure to be at work.

There now appeared but one other alternative—the chance of an operation—and which, owing to the state of the joint, it must be confessed was not very promising. The almost certain result of the case as it *was*, together with the *probable* and *possible* consequences of an operation for the removal of the offending body, were again fully and fairly stated to the patient and friends. Dr. Almiron Fitch, of Delhi, a distinguished member of the profession in this section of the State, was also consulted, and coincided fully in the opinion given.

*Operation.*—Early in March last I was requested to remove the foreign body by operation. Having enjoined rest, low diet, and occasional purgatives during the ensuing week, on the 10th instant I proceeded to remove it; Dr. Fitch kindly consenting to be present, and from whom I received valuable assistance. Some delay and difficulty were experienced in confining the same in the position desired, viz: upon the inner condyle, without occasioning too much motion of the joint. The integuments were then drawn tensely forward (about one inch) over the foreign body while the same was firmly fixed by the fingers of an assistant. A longitudinal incision, three-fourths of an inch in

length, was then carried through the integuments directly upon the cartilage, (?) but, as it could not readily be removed, a second incision was made, so as slightly to enlarge the first, when with a tenaculum it was removed, with some difficulty, owing to the thickened state of the joint, and the unexpected *hardness* of the supposed cartilage. In form it much resembled an almond, was eight lines in length, six broad, and four in thickness. Its substance was evidently osseous or calculous, but unfortunately (and contrary to agreement) it passed out of my possession before I had an opportunity of subjecting it to any chemical or microscopic tests. It was completely enveloped in healthy looking cartilage.

The hemorrhage was slight, and soon ceased, when the incision was nicely secured by plasters, a compress carefully adjusted so as to securely close the *valvular* opening, and over these a figure of 8 bandage; the whole being completed by a long splint to outside of limb, secured by roller, except over the knee, nearly preventing all motion. Water was applied several times a day, and was the only application. There was a slight exudation of serum, but none of synovia. The diet was light for a few days, and small occasional doses of pil. cath. comp. and pulv. jalap. comp. were given, to procure the regular evacuation of the bowels. Union was partly by first intention, and partly by what Macartney calls the *modelling* process, *i. e.*, without suppuration. The case was closely watched, and there was no inflammation at any time.

After a few days the patient sat up part of the time, but the plasters and splint were not dispensed with until the thirteenth day, when the wound appeared perfectly united. A compress and figure 8 bandage were continued, and directions given to use and flex the limb but slightly; but from that time he began and continued to go about. April 15th there was only a slight weakness, and some stiffness upon flexing to an acute angle. At the end of six weeks he was attending to his ordinary occupation, and was able to join, as he was wont to do, in "the giddy mazes of the dance."

*Remarks.*—The operation by subcutaneous incision, as proposed by Prof. Syme and M. Goyraud, was hardly practicable, owing to the thickened state of the integuments, though it would

in most cases greatly lessen the danger of inflammation. Wounds penetrating the cavities of joints, especially the larger, have ever been the dread of surgeons, and the common result an opprobrium to the healing art. This case is a striking illustration of the importance of *perfect rest* (of the joint) and of a *simple*, but not *too* antiphlogistic treatment; though in regard to the latter the previous habits should be our guide. Here there was evidently a *want* of action, though the diet was "light" for only a few days, but had it been more generous, I am satisfied complete union by first intention would have taken place—a most desirable result in wounds of joints.

The history of this case may, and will doubtless, satisfy some minds, that a *fragment* of bone was nearly or quite detached at the time of the injury mentioned; but to my mind it is not so conclusive. A section of one end of the foreign body revealed a hard, friable substance, more resembling calculus. But, was a calculus ever completely enveloped in healthy cartilage? If so, it is a most remarkable provision of nature to prevent injury to the joint. May not a peculiar abnormal state of the synovial membrane, from any cause, give rise to an adventitious growth or deposit in the synovia as well as in other fluids of the body? Loose cartilages and calculous concretions are not very usual, but I do not recollect any account of a foreign body in the cavity of a joint, similar to the present.

The patient consulted different surgeons, to whom he stated the symptoms and diagnosis; but it is a curious fact, that none of them, at the time, detected the foreign body, (though part were satisfied of its existence,) and at one time, believing it a case of chronic synovitis, counter irritants, and ung. iod. comp. were freely applied, to procure absorption!

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## *Case of Conception before the Appearance of the Menses.*

By Wm. T. Taylor, M. D., Philadelphia.

To the Editors of the Medical Examiner.

Gentlemen,—The general experience of the medical world has established it as a physiological fact, that conception cannot take place prior to the appearance of the menses. But there are instances of females becoming mothers, who have never

menstruated; they, however, must have conceived just at the time when the catemenia were about to be established, which after parturition and suckling probably occurred regularly.

The following case, which I have met with, seems to be an anomaly in the annals of midwifery:

During the month of June, 1851, I was requested to visit Hannah B., a mulatto, who was pregnant with an illegitimate child. Was much surprised at finding my patient herself was a mere child in appearance and manner. She was thirteen years of age on the 3d of the previous February, and, though she had never menstruated, was, when I saw her, in the eighth month of gestation. Her general condition was plethoric; her breasts well developed, and the areola quite dark.

On the 13th of August she was taken in labor, but in consequence of a prolapse of the funis umbilicalis, which could not be replaced, I delivered her of a still-born child, of the usual size, and perfectly formed. The lochia continued for a few days, and she passed through the accustomed period after delivery very favorably.

It is now one year since, and her menses have not yet made their appearance, nor has their been any vicarious discharge; her health during the whole time remaining perfect.

Never having read of a case of the kind, I have sent it to you for publication, should you think it of sufficient interest.

*Philadelphia, August 19th*, 1852.

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*Case of Fracture of the Cranium.* By H. J. Rice, M. D., of Rockville, Indiana.

James Medley, aged fifteen years, sanguine temperament, in September 1851, received an extensive fracture of the cranium from the kick of a horse. The animal struck him with the front part of the shoe along the superciliary ridge of the right eye. The rim of bone forming the superior semicircular margin of the right eye came away by the slightest traction, this rim extending from one angular process to the other. The external wound through the common integuments and muscles extended transversely above the eye for the distance of three inches. Sim-

ple inspection and the use of a probe disclosed that nearly the whole superior portion of the frontal bone was driven far down on the brain.

The lines of fracture were three. The first commencing at the external angular process of the frontal bone, extended in a straight course towards the same process of the left side, passing the median line towards the left, an inch and a half, disclosing the superior margin of the frontal sinus. The second ranged along the temporal ridge till it met the coronal suture. The third passed transversely from the terminus of the second to a point an inch and a half to the left of the median line. The fourth, which would complete an irregular quadrilateral, I presume, was an example of bent bone, or a linear fracture of the external table, for this side was not depressed beyond the common level. Here was a shocking fracture; nearly the whole frontal region was driven down on the anterior lobes of the brain. The bone was firmly located in its false position, and the brain covered by the dura mater presented some hernial protrusions along the first line of fracture. My best endeavors to bring the plate to the common level failed. An incision through the muscles and integuments was made along the second line of fracture. A large flap could now be raised, for the depressed portion was perfectly stripped of its integuments; the pericranium being peeled from every point, and torn into shreds, was removed. It was still impossible to elevate, for the bone was firmly and almost immovably fixed in its false position. The internal table had scaled beyond the line of fracture in the external, at some points for the distance of quarter of an inch. A small trephine and Heys' saw were brought to bear, some snags of bone removed; and with elevators, by using cautiously what seemed to be a dangerous degree of force, the whole depressed portion was elevated to the common level. The dura mater, so far as could be detected, was not pierced, but was peeled from the depressed portion. The hæmorrhage was inconsiderable; a branch of the temporal artery required the ligature. Coagula were removed, the flap of tissues brought to its natural position, and confined by sutures, a sufficient aperture being left at the point from which the lines of fracture started, to give exit to the fluids of the wound. This extensive fracture and depression

of bone did not produce corresponding psychological effects; there was a little mental hebetude.

*September 5th.* The patient was aware of all that transpired, answered questions, and knew his friends. There was partial insensibility to pain,—pulse 90 in the minute; skin moist. Charpie, saturated with tepid water, to be applied to the wound every half hour, was all the dressing required. Perfect rest and quietude enjoined, low diet, a saline purgative. R. Magnesiæ sulph. ʒi.

*Sept. 6th.* Passed a good night—bowels moved twice; pulse 100; skin moist; wound discharging and looks well; sutures removed, save one; union by the first intention in the line of incision; adhesive strips applied; rest and low diet.

*Sept. 7th.* Rested well during the night—pulse 100; no pain; some inflammation and redness of the flap; skin moist; healthy discharge from the wound. Ordered a saline cathartic.

*Evening of 7th.* Some pain in the head; irritability of stomach; restless; pulse 110; bowels not moved. Repeat the cathartic, magnesiæ sulph. ʒi.

*Sept. 8th.* Passed a restless night; face flushed; pulse 120; corded and tense; throbbing of temporal arteries; somewhat delirious; V. S. twenty-five ounces; magnesiæ sulph. ʒii. antim. tartrat. gr. ¼—to be taken every hour till the bowels move freely; after which the tr. emetic to be continued, gr. ¼ every hour.

*Sept. 9th.* Patient somewhat restless during the night—bowels freely moved; pulse 100; compressible; no irritation of stomach from the antimony. Continue the tr. emetic.

*Sept. 10.* Patient rested well during the night; skin moist; pulse 100; mind clear; healthy discharge from wound; low diet and rest.

*Sept. 11th.* Improving,—all symptoms of inflammatory action have subsided; lint saturated with warm water to be re-applied, (having been exchanged for cold applications during the period of excitement.) Nothing can be more injurious than heavy dressings to wounds of the cranium; the lighter the better for the patient.

It is unnecessary to give the history of the case any farther;

from the application of simple and well established rules in the treatment of such cases, resulted a perfect cure.

In three weeks from the reception of this injury nothing but a cicatrix remained to tell the story of the accident.

Some ten months have elapsed since the injury—not a bad symptom has followed; sound as ever in body and mind, with a deformity by no means considerable.

I make this report, 1st, because it adds another recovery to the list of apparently hopeless cases.

2d. It proves that a cranial bone does not necessarily die when stripped of its dura mater and pericranial investments.

3d. As exhibiting the power of active depletion and tr. antimony in controlling the inflammatory process.

4th. As showing the vast amount of cerebral compression without corresponding manifestations over life and intellect.

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*Ice as a local Anæsthetic.* By W. A. Berry, M. D. Washington, D. C.

Messrs. Editors,—I propose to make known to the many readers of your valuable Journal the application of a new local anæsthetic agent, which probably is not familiar to a large majority of them. This agent is applicable to but a very limited part of the frame, but its efficiency is such as to cause its use in all like cases. I refer to the local anæsthetic effect of ice in the removal of the nails of the toes or fingers. This most painful operation is disarmed of all its terrors by this simple means, and the patient witnesses it with as much composure as his operator. The agent was first made use of in the wards of M. Velpeau, during the past summer, in Paris, by one of his internes, and afterwards successfully applied by himself in a number of cases. The ice is powdered finely and mixed with a sufficient quantity of salt; next enveloped in a thin cloth, and the two phalanges of the great toe or thumb enveloped in it; the application should not be continued over five or six minutes, this time being sufficient to produce the most perfect anæsthesia. M. Velpeau proceeds with the operation in the following manner: Immediately upon removing the ice, the nail is divided in its length with a common sized bistoury from its free extremity to the root, then seizing

each half successively with a strong forceps, it is removed with a moderate *jerk*. The frequent necessity for the performance of this operation, and the great pain attending it when removed under other circumstances, is sufficient to cause its universal application by the Profession. M. Velpeau directs the application of compresses of cold water to the part during the first twenty-four hours; and the simple cerate dressing for a few days is all that is required.

It may be objected that the reaction under the application is such as to prevent its use; I will simply say that of the six patients that I saw operated upon by M. Velpeau, no such accident occurred to any one of them; and to the one case in which we applied it but a few days since, (and which has suggested this communication,) we have reason to believe that the agent is free from any unhappy results.

The simplicity and efficacy of this piece of minor surgery, and the so frequent necessity of some surgical interference in these cases, has induced me to send you this communication.

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## CLINICAL REPORTS.

*Clinic of Jefferson Medical College. Service of* PROFESSOR DUNGLISON. *February*, 1852.

(Reported by J. AITKEN MEIGS, M. D.)

We to-day direct your attention, in the first place, to a case of intermittent fever.

W. J. R., æt. 18, comes to us laboring under that particular form or type of this disease, known as the quotidian—the paroxysm occurring daily about 10 o'clock in the morning. He has been suffering from the affection about two weeks, and although recourse has been had to the great antiperiodic,—quinia,—it appears to have exerted but little of its controlling influence on his disease. One reason for this may be his continued residence in a malarious district. He lives in the south-western limits of the city, —near the Schuylkill river,—a locality in which, during the vernal

and autumnal seasons, intermittent and remittent affections are still very common; though, in consequence of the improvements lately made in this section of the city, by no means as prevalent as formerly. The banks of the river, throughout their entire length, were at one time so rife with the malarious principle,—whatever that may be,—as utterly to preclude all idea of a protracted residence in the vicinity, and many of the country mansions along the river, erected and owned by citizens of this town, were rendered, thereby, entirely untenable during a great part of the year.

The autumn generally presents us with a larger number of intermittents than the other seasons of the year; and I am inclined to consider, that the present case, though occurring, as you see, in the winter season (February), really originated in the previous autumn, and has been elicited, or made itself apparent at this late period, in consequence of accidental circumstances. Indeed, some writers are of opinion, that in all these cases, even in those occurring in the spring, the primary impression is made during the autumnal months. Exposure to the malarious cause, during the fall, may be insufficient to produce immediately an open attack of the disease; but the morbid impression after remaining in the system dormant, as it were, through the winter, is suddenly brought into active operation by the slightest excitation, as exposure to cold, heat, unusual fatigue, mental inquietude, &c., and the febrile paroxysm follows.

I have long maintained the opinion, that it would not be improper to class intermittent fever among the neuroses. It certainly displays, in its course, very marked neuropathic phenomena. The miasmatic impression falls primarily upon the nervous system, with greater or less intensity, producing the cold or congestive stage, as a result of the extreme nervous depression or sedation. The system soon begins to react; the cutaneous capillaries gradually become filled, to the immediate relief of the congested viscera; and after a few hours of alternate flushing and chilliness, the hot or febrile stage—the stage of expansion—is fully established. Finally, the paroxysm resolves itself by a copious diaphoresis, and during the ensuing apyrexia or intermission, the patient, with the exception of a certain degree of debility, may enjoy his usual health. If the disease be not now

checked, sooner or later, according to the nature of the type, a second attack occurs; and then a third; and so on until an arrestation is produced either spontaneously or by therapeutical intervention.

The intervals between the paroxysms are of the same duration; in other words, the disease is periodical in its character. Now, although our ignorance of the nature of the laws of periodicity is very profound, yet as we see these laws manifested in remittent and hectic fevers, as well as in the disease under question,—and also in certain functions of the healthy economy, as the menstrual act,—sufficient is known to render it highly probable, that this periodicity is closely connected with the functional manifestations of the nervous system. This supposition of the nervous character of intermittent fever, is further substantiated by the fact, that the paroxysm may oftentimes be arrested by the sudden production of a moral emotion. The cold stage has been completely checked, for the time being, by fright, or by the receipt of highly joyous or very painful intelligence. Mesmerism,—the power of which depends altogether upon the impressibility of the nervous system,—will sometimes produce the same desirable effect. I recollect an anecdote, illustrative of this, told me by Ex-president Madison. Mr. M. was travelling in company with Lafayette, who had been inducted into the mesmeric mysteries by the celebrated Loutherberg, a pupil of the far-famed Mesmer, when John, the servant of the former, was seized with a paroxysm of intermittent. Wishing to test the mesmeric powers of his distinguished friend, Mr. Madison recommended a trial of the art. Lafayette complied with the advice. The paroxysm was commencing, when Lafayette stared John in the face, seating himself in front of him, and holding him firmly by the hands. In a few minutes, John declared that he felt better; and by a continuance of the process, the paroxysm was entirely prevented.

Again;—our potent therapeutical agents, tonics and antiperiodics, employed in the disease, strongly bear out the opinion of its neuropathic character. They all prominently affect the nervous system, and are valuable in proportion to the degree of impression which they are calculated to make on the nerves of gustation, and on those distributed to the alimentary canal. The correctness of this view is proved by the fact, that the salts

of quinia are much more efficient in solution, than in pill,—according to one observer, one third more. Furthermore, it not unfrequently happens, that when the sulphate of quinia fails to arrest the paroxysm, opium, in the dose of gr. ij., or an equivalent of any of its preparations, given at the moment when the lividity and contraction of the skin begin to announce the attack, will often effectually arrest it, in consequence of the narcotic influence, which it exerts, manifestly on the nervous system.

The propriety, then, of ranking periodical fevers with neurotic affections is founded upon the threefold consideration of the modus operandi of the cause of the disease, its periodical character, and the effects of the agents employed for its removal.

In the case before us, there is, as you can readily ascertain by percussion and inspection, some enlargement of the spleen, a common, and by some thought a universal, accompaniment of this form of fever. This increased size of the spleen is attributed with much propriety to the undue accumulation of the circulatory fluid in the vascular apparatus of the organ. Indeed its tendency to become thus congested during the cold stage is one of the reasons in favor of its acting as a diverticulum to the blood under like circumstances; since, from the great distensibility of its tissue, it is much better able than any other viscus to withstand the pressure incident to the extreme engorgement to which it is, at times, subjected in the disease under consideration. In chronic cases, however, the increase in volume is mainly dependent upon hypertrophy of the substance of the organ, or upon altered nutrition, induced by repeated and long continued engorgements.

In tropical climates, as in India, the splenic affection sometimes assumes an exceedingly dangerous and formidable aspect. The whole system deteriorates, the blood becomes depraved, and hemorrhage from the gastro-enteric mucous surface, or hydropic effusions, ensue. To this distressing condition, the name of "splenic cachexia" has been given by the practitioners of India more especially. Independently of the engorgement of the spleen, the irregularity in the circulation, in the various stages, by disturbing the healthy equilibrium between the absorbents and exhalents, frequently gives rise to œdema—another pathological

point of importance, but which is not presented in the case now before you.

As regards the treatment, but little need be said: an ordinary ague is, indeed, so readily managed, that, frequently, the aid of the physician is not sought after. During the first or cold stage of the paroxysm, as the blood manifests a centripetal tendency, producing, at times, great and dangerous congestion of certain vital organs, as the brain, lungs, &c., every attempt should be made to re-establish the sanguineous equilibrium, by inviting an afflux of blood into the peripheral capillaries. Especially should our efforts be so directed, where the nervous sedation is extreme, as well as unduly protracted. The warm bath at this period is highly beneficial, in consequence of favoring the speedy supervention of the stage of expansion or reaction, by the determination it produces towards the cutaneous surface.

In the hot stage, the cooling system must be adopted throughout; whilst but little attention, excepting to the comfort of the patient, is needed in the sweating stage.

During the intermission, as you are aware, our principal efforts for the eradication of the disease are to be made, and for this purpose the salts of quinia, as the sulphate, or some of the preparations of cinchona, constitute our main reliance. Having obtained a clear mucous surface by the exhibition of an emetic or cathartic, if either or both of these agents seem to be indicated, we administer the antiperiodic in the dose of five grains about one hour before the attack. In half an hour, the dose is repeated, and, again, about the time the paroxysm is expected. I prefer this mode of administering the remedy to that adopted by many physicians, of distributing it over the entire apyrexia.

Ten grains given in solution I have found succeed in arresting most of the intermittents that have fallen under my care in the first instance, and where the paroxysms have not often recurred—one dose of five grains given an hour, and the other dose half an hour, before the paroxysm, as in the following mixture:

R. Quiniæ sulphat., gr. xv.
Acid. sulphur. dil. gtt. xxv.
Aquæ f. ʒiij. M.

Dose, one-third.

The great object to be kept in view is to make a new impression on the nervous system, so decided as to break in upon the morbid chain of associated actions, formed under the malarious influence.

The salts of quinia were, at one time, considered to be excitant, and they were always interdicted during the hot stage, notwithstanding it had been an old observation, that when powdered cinchona was given during the hot stage, it did not appear to excite the organic actions, whilst its antiperiodic virtues were not the less manifested. Careful and well directed inquiries have shown, that full doses are decidedly sedative; and hence, instead of apprehension being entertained from their administration where inflammatory action is present, they have even been found useful in the most violent inflammatory diseases—pneumonia, for example, when occurring in malarious regions. It has been a misfortune, that therapeutists have been misled in regard to some of our most valuable drugs, and this at times owing to an improper classification of them according to their presumed operation on the system. Cinchona and the salts of quinia being tonic, it has been thought that they could not fail to be excitant, and yet all admit that there is a manifest difference between healthy tone and unhealthy excitement. The valuable drug, opium, has been withheld in numerous cases, in which its use would have been precious, because it has been improperly classed amongst excitants. It is true, that in a small dose it belongs to that division of therapeutical agents, but in a large dose it is unequivocally sedative, and, hence, admirably adapted for cases in which inflammatory action may have to be combated.

It occasionally happens, perhaps from peculiar idiosyncrasy of the patient, that quinia has not its wonted influence. In such cases, much good may be anticipated from a resort to the arsenical preparations, of which the liquor potassæ arsenitis, of the U. S. Pharmacopœia, is generally chosen. In other instances, pulverized cinchona is productive of much benefit, although its active principle may have had little or no effect on the disease. In these cases the ligneous matter of the bark, in all probability, comes in aid of the alkaloid, by the excitant impression it makes on the nerves of the alimentary mucous mem-

brane. In good cinchona, we have, besides, all the febrifuge principles which may act more beneficially than the isolated quinia.

The sulphate of quinia, though judiciously administered in the present case, has, I said, been productive of little or no good. We must seek, therefore, to impress the nervous system in some other manner. With this object in view, then, the the patient will be directed to take, at about seven o'clock in the morning, an emetic consisting of pulvis ipecacuanhæ gr. xv., to be repeated in a short time if the first dose fails to act promptly and vigorously. Half an hour or an hour after the cessation of the emesis, pulvis cinchonæ is to be exhibited in the dose of grs. xx. every half hour, up to the time of the expected attack. This plan is to be repeated three mornings in succession. By such procedure, we shall be enabled to exert a three-fold action upon the nervous system—through the emetic, the alkaloid, and the woody matter of the bark.

The result of this treatment you will have an opportunity of witnessing in a few days.

[The patient did return, and reported himself cured.]

The class will have observed, that many of the cases of intermittent have been cured by the pulvis cinchonæ administered in this manner; and I have had recourse to the antiperiodic in this form, in consequence of the sulphate of quinia being so constantly prescribed, that you have but little opportunity for witnessing the action of the cinchona itself; which, in eleemosynary institutions like our own, has the advantage, that the cure performed by it is at much less cost. I have rarely had occasion to exceed the half drachm doses given at the same time, and under the same circumstances, as the five grain doses of sulphate of quinia before referred to.

# THE MEDICAL EXAMINER.

PHILADELPHIA, SEPTEMBER, 1852.

## OBITUARY.

We regret to announce the death of Dr. Isaac Parrish, of this city, by dysentery, after a short illness.

Few men could be less spared than Dr. Parrish; he was essentially a working man in the profession, both in the daily routine of practical duties and in everything calculated to advance and elevate it. To the pages of this journal, as well as of many of the other medical and daily presses, he was a constant and welcome contributor, and his articles were always characterised by sound judgment and practical bearing. He died in the prime of life and in the full tide of a successful practice, beloved and respected by all who knew him.

## APPOINTMENT IN THE UNIVERSITY OF PENNSYLVANIA.

Dr. Robert E. Rogers, late Professor of Chemistry in the University of Virginia, has been elected to the same department in the University of Pennsylvania. Dr. Rogers is a brother of the late incumbent, and brings to the chair all the talent and experience that will enable him to fill the post acceptably and profitably.

Drs. Austin Flint and B. Palmer, late of Buffalo Medical College, have accepted chairs in the University of Louisville.

We have received the announcement of a new Medical School in Cincinnati, called the *Miami Medical College.*

## MEDICAL NEWS.

*Philadelphia*, Aug. 10th, 1852.

Dear Sir:—The Northern Medical Association have requested me to furnish you with the accompanying resolutions for publication in the Medical Examiner.

J. Henry Smaltz, *Secretary.*

F. Gurney Smith, M. D.

At a Special Meeting of the Northern Medical Association, held Aug. 5th, 1852, the following Preamble and Resolutions were adopted:

*Whereas*, An All-wise Providence has, in his dispensations, seen fit to remove from earth one of the members of our Medical Association;

*Resolved*, That in the death of GEORGE W. PATTERSON, M. D., the members of the Northern Medical Association painfully recognize the loss of a talented and valuable brother, and feel that the community at large has been deprived of a most useful and benevolent citizen.

*Resolved*, That while we bow with proper submission to our great affliction, we will remember and profit by the irreproachable example of upright deportment and sentiment, always evinced by the lamented deceased.

*Resolved*, That while we sincerely mourn this great public and private bereavement, our grief is tempered by the full assurance that our departed friend has entered on a happy immortality.

*Resolved*, That Dr. Joseph R. Bryan be requested to prepare a Biographical Notice of our deceased, lamented member, to be read before the Association.

*Resolved*, That as an evidence of our sympathy with their sorrow, a copy of these our sentiments be transmitted to the family of our late associate.

*Resolved*, That on Saturday next, at 3 o'clock, P. M., the members of this Association will assemble at the usual place of meeting, in order to attend the funeral of our deceased fellow member.

*Resolved*, That a copy of these proceedings be furnished for publication in the Medical Examiner and News, and in one or more of the daily papers.

BENJAMIN S. JANNEY, President.

J. HENRY SMALTZ, Secretary.

DR. JOHN HASTINGS, of San Francisco, California, in a letter to one of the editors, says that he has found a very certain and easy method of introducing Iodine into the system in cases of Phthisis by means of inhalation. A small quantity of dry iodine is placed in a tumbler or cup in the chamber of the patient and allowed to escape by volatilization. He also recommends the introduction of raw or carded cotton into the vagina as a substitute for the pessary. The cotton should be rolled up firmly, so as to fill the vagina, be well anointed, and have a piece of tape secured to it in order to remove it after a few days; after which the vagina should be syringed with cold water and a fresh piece of cotton introduced, and held in situ by a T bandage.

The same gentleman reports two cases of traumatic tetanus successfully treated by the inhalation of Chloroform.

# RECORD OF MEDICAL SCIENCE.

## PATHOLOGY AND PRACTICE OF MEDICINE.

*An Inquiry into the proximate cause of Gout and its rational Treatment.* By ANTHONY WHITE, Esq., M. B., Cambridge, late President of the Royal College of Surgeons of England.—I have for some time been engaged in preparing a work on Diet, wherein I purpose, among other things, to trace out the connection between sundry constitutional disorders, and the habitual abuses of the digestive organs in childhood as well as in the adult age. I had intended to embody in that work certain theoretical and practical views, which long experience and reflection have led me to entertain on the subject of gout; but having been strongly solicited by several professional friends not to delay the publication of that portion of my notes, I have here thrown them into the shape of a separate paper.

In venturing to propound a new theory of gout, I do not conceal from myself the hazards I incur. The very announcement of my design must, I am aware, provoke against it a formidable array of prejudice, since it is natural to predict the failure of every fresh adventurer in an enterprise so often and so strenuously essayed, and always essayed in vain. On the other hand, I submit that there is a wide distinction between what is merely improbable and what is impossible, and that, however difficult be the problem I profess to solve, at least, it involves no absolute impracticability. It is safe to reject, *à priori*, the claims of one who shall pretend to have discovered the perpetual motion, or the elixir vitæ, or to have unravelled the impenetrable mysteries of ontology; but an inquiry into the natural history of any given disease belongs to quite another category; nor does there exist any reason why science should ever halt in despair at any unaccomplished point in her proper business, which is in every instance to trace back step by step those trains of phenomena to which, as we regard them in their unvaried order of sequence, we attribute the relationship of cause and effect. In some cases, this kind of research has been prosecuted almost to its last limits, whilst in others it has stopped short at an early stage, and there remained for centuries, in spite of countless efforts to discover the missing clue to the next step. But soon or late the clue will be found, and the further step achieved; for no amount of lost labor can exhaust the persevering energies of science—no lapse of time can subject her powers to bar or proscription. How often—to use the language of Sir John Herschel—how often have "we seen obscurities, which seemed impenetrable, in physical and mathematical science, suddenly dispelled, and the most barren and unpromising fields of inquiry converted, as if by inspiration, into rich and inexhaustible springs of knowledge and power, on a simple change of our point of view, or by merely bringing to bear on them some principle that it had never occurred before to try?"

I believe that, without arrogating to myself any inordinate share of

acumen, I may affirm that, through one of those happy accidents adverted to in the foregoing extract, I have been prompted to the true answer to that hitherto unsolved question—What is the proximate cause of gout?

In addition to the ordinary opportunities of a long professional life, my means of becoming intimately acquainted with this disease have been in part of a peculiar nature, such as falls in an equal degree to the lot of few medical practitioners, and such, I may boldly assert, as no man will be inclined to envy me. Corvisart's classical treatise on diseases of the heart was the work of a man who was himself afflicted with one of those organic maladies he so ably described. The symptoms of ulceration of the stomach were vividly portrayed by Béclard, from his own sad personal experience. The connection between organic disease of the brain, and certain disorders of the sensorial functions was illustrated, as it could never otherwise have been, by Dr. Wollaston's description of his own case, which he studied with the same serene sagacity and precision as characterized every other exertion of his noble intellect. I, too, however unfitted to compare in other respects with those illustrious men, have this, at least, in common with them, that I have learned from my own sufferings some facts likely, as I trust, to prove of considerable importance to medical science.

I am the offspring of parents both of whom were constantly the subjects of gout—a disease which was inherited by their four sons. Two of the latter (twins) died at the respective ages of 45 and 46, worn out by reiterated attacks of the malady. For myself, sharing largely in the family predisposition, I very early in life began to exhibit signs of latent gout, shown in the ready conversion of common nutriment into acrid acidity; and among my earliest recollections are my mother's repeated administrations to me of magnesia and alkaline preparations, to remedy the heartburn, with which I was constantly tormented. About the age of sixteen, a fixed aching pain occupied the middle flexor tendon of my right hand near the root of the finger, preventing its flexure. In the course of a week or two, the pain in the finger ceased suddenly, and was almost immediately succeeded by a severe attack of gout in the large joint of the great toe, ushered in by all the usual precursory symptoms. The subsequent visitations of the disease have extended over a period of forty years, during which it has affected every tissue of my body. Hence, I have had abundant opportunity not only to experiment upon the gout in my own person as regards dietetics and therapeutics, but also to study its natural history under the least ambiguous conditions, whenever, as not unfrequently happened, I allowed a paroxysm to run its course, and effect its own cure. It was chiefly by noticing what took place under such circumstances that I was led to entertain those views which I shall presently lay before my reader.

But first, for the sake of clearness, it will be well to define the actual state of our knowledge as to the intimate nature of gout; and this, I think, cannot be better expressed than in the following propositions wherein Dr. Holland has comprised all that is ascertained, or to be strongly presumed, on the subject:

1. "That there is some part of bodily organization disposing to gout, because it is an hereditary disease.

2. "That there is a *materies morbi*, whatever its nature, capable of accumulation in the system, of change of place within the body, and of removal from it.

3. "That though identity be not hitherto proved, there is a presumable relation between the lithic acid, or its compounds, and the matter of gout; and a connection through this with other forms of the calculous diathesis.

4. "That the accumulation of this matter of the disease may be presumed to be in the blood; and its retrocession or change of place, when occurring, to be effected through the same medium.

5. "That an attack of gout, so called, consists in, or tends to produce the removal of this matter from the circulation, either by deposition in the parts affected by the excretions, or in some other less obvious way, through the train of actions forming the paroxysm of the disorder.

6. "That there is an intimate relation between the condition of gouty habit and the functions of the kidneys and liver, both in health and disease.

7. "And that the same state of habit or predisposition which in some persons produces the outward attack of gout, does in others, and particularly in females, testify itself solely by disorder of internal parts, and especially of the digestive organs."

The opinion that hereditary predisposition to gout consists solely in a peculiar character of the ligamentous and other associated textures, is surely untenable, although it has been advocated by some authors of eminence. The disease, however prone to affect the joints chiefly, is incident likewise to all the other fibrous textures of the body without exception. The constitutional disturbance that precedes its attacks, the many functional aberrations of the assimilating, secretory, and excretory organs by which it is accompanied,—its erratic character, and the rapidity of its transitions from one part to another,—are facts tending most strongly to the conclusion that the immediate cause of the malady is not local, but general, and that the vehicle of its diffusion over the whole system can be nothing else than the circulating fluids.

Furthermore, did we suppose that hereditary transmission of gout is identified with a peculiar condition of those solids which are the most frequent seat of gouty inflammation, its active development would then have to be accounted for in one or other of the two following ways:—Either the transmitted peculiarity in question is an actual *materies morbi* deposited in the vitiated textures, or it is such a structural peculiarity of the latter as renders them especially liable to the noxious influence of a morbid principle produced in the body by other causes. Either hypothesis leads to the conclusion that gout is a blood disease. The second of the two does this directly and immediately, for it assumes the independent existence of an exciting cause, to be brought in contact with the morbidly predisposed parts through the medium of the circulation; whilst, on the other hypothesis, it is evident that the transmitted *materies morbi* must be taken up into the blood, contaminating its

mass, and producing in it effects analogous to those caused by other animal poisons imbibed from without.

But there is another class of solids, namely, those concerned in the functions of organic life, which have paramount claims to attention in every inquiry like the present. It is evident that any inherent vice in one or other of the great chylopoietic viscera, must of necessity induce a proportional depravity in the circulating fluids. Reasoning, then, *à priori*, there is nothing unwarrantable in the conjecture that the real *fons malorum* transmitted by the gouty to their offspring, is an unwholesome blood-making apparatus. Such a conjecture, I repeat, is by no means improbable, and my own observations and reflections are all in favor of its positive truth.

On the whole, then, we may safely admit that hereditary gout is a disposition to generate a certain morbid matter within the body, whether that disposition be the effect of some abnormal organic condition, promoting its formation or impeding its due excretion, or of some transmitted impurity of blood which tends, as usual in such cases, to reproduce and continue itself by vitiating the nutritive functions.

The same disposition, but created by other causes, must obviously exist in those cases in which gout occurs as an idiopathic disease. Its individual or ancestral origin is a circumstance which may influence the intensity of its development and its pertinacity in the system, but in no way affects its intrinsic nature. Whether hereditary or not, it presents the same general characteristics, and is of course attributable to the same material agent.

Setting out, then, from this cardinal principle of a *materies morbi* circulating with the blood, we have next to investigate its nature and its origin. And here we are struck, on the very threshold of the inquiry, by the close affinity between the gouty and the lithic acid diathesis—an affinity so remarkable that a very general disposition prevails among medical writers to consider lithic acid as the true gouty poison, and to impute its presence in the system to the impaired action of the kidneys.

As to this latter notion, the arguments adduced in support of it appear to me to be based on a singular misapprehension of patent facts. The discharge of lithic acid and its salts in the urine is a salutary process; and while the kidneys are actively performing such a process, it is strange indeed to charge them with creating the offensive matter they only serve to remove. It is not from the presence of lithic acid sediments in the urine of the gouty, but from their absence, that we should be warranted in ascribing to defective action of the kidneys the accumulation of that excrementitious matter in the system. If the blood was manifestly surcharged with lithic salts or their equivalents, while none such escaped in the urine, then, indeed, we should have reached the end of our inquiry in full assurance that the kidneys were the very matrices of gout. But it is not so in reality: and the most we can venture to assert is, that the renal functions, in common with others, are secondarily affected by the cause, whatever it be, of the gouty diathesis.

I think it the more necessary to insist on this point, as it is one on which so acute and lucid a reasoner as Dr. Holland appears to have fallen into error. "The kidneys," he says, "are evidently the organs of the body upon the disordered or deficient action of which depend those changes in the circulating fluids which have the closest relation to all the phenomena of gout." He would, I think, have been nearer the truth if he had said that the kidneys are, of all organs, those whose secretions afford the most faithful and the most readily discernible evidence of the changes aforesaid.

However intimate the connection between the gouty and the lithic acid diathesis, evidence is yet wanting to establish their actual identity. If the *materies morbi* we are in search of was nothing else than lithic acid, we should naturally expect to find every considerable development of that product followed by a gouty paroxysm. But this is notoriously not the case. It is no uncommon thing to find the urine constantly loaded, during a long period, with lithic acid sediments, without the occurrence of a single gouty symptom; while, on the other hand, it is known that the gouty paroxysm sometimes occurs without the excess of lithic acid in the urine. Instances of this kind, occurring in æsthenic forms of the disease, have been mentioned by Dr. Todd in the Croonian Lectures for the year 1843:—"I have remarked," he says, "a peculiarity belonging to most of the cases of this kind that I have met with, namely, that the urine does not exhibit the abundant precipitate of lithates which so often accompanies the gouty paroxysm. In some instances there was no precipitate at all; and in others it was very slight. And the specific gravity of the urine was rather below than above the ordinary standard, indicating that no excessive quantity of either urea or lithic acid was held in solution."

The gouty poison, then, is not identical with lithic acid, but is so near akin to it that the chemical and pathological characteristics of the latter may probably yet serve as indices to guide us to the discovery of the former.

"Organic chemistry," says Dr. Holland, "has taught us how readily the elements out of which all animal matter is formed are displaced from one combination and enter into others; and how very slight, frequently, are the differences, indicated by analysis, between substances eminently noxious to the system, and those indifferent or beneficial to it. We owe, further, to recent experiments the explicit proof of what simple observation had partly shown before—the remarkable effect upon the whole mass of the blood of minute quantities of certain matters brought into the circulation—leading to the inference of analogous effects from an increased proportion of one or other of the principles accumulating or being unduly retained in the body. . . . . These circumstances, now familiar to us, do certainly not identify the material cause of gout with any of the animal excretions just named [lithic acid, urea, the lithic or purpuric salts, &c.]; but they tend to concentrate our views towards them, and give a much more specific direction to future research. The assured connection of the gouty with the calculous diathesis,—the chemical nature of the concretions and deposits in the former,—and the

evidence that these deposits often become in part a substitute for the more active forms of the disease—all concur in further sanctioning the same general view. If we cannot affirm that urea, the lithic acid, or other animal compounds circulating in the blood, give cause to the phenomena of gout, under the most cautious reasoning, we are at least entitled to assume, with some confidence, that these matters secreted from the kidneys *are the equivalents to gouty matter present in the system*,—that they have certain proportion of quantity to each other,—and that upon their balance depend all the essential characters of the disease,—its modifications being determined by various causes; some of them topical, some belonging to general functions implicated in the effects of this common cause."

I particularly invite the reader's attention to the words above printed in italics. They imply that the morbid developments of lithic acid and its salts may be due to the presence of some principle altogether unlike them in sensible properties and chemical composition.

And now we may proceed to deal with the special object of this paper, which aims at determining the primary seat and the essential nature of the disease in question. To this end I shall succinctly narrate the course of induction whereby I arrived at those views which I desire to recommend to the candid examination of my professional brethren.

Having endured innumerable visitations of gout, and having had recourse to a variety of medicaments, some of which were fearfully destructive to my general health, I at last set about watching attentively the method which nature herself adopts for the cure of this disease. Thus it frequently happened, during my forty years' conflict with my hereditary malady, that I submitted to the old plan of patience and flannel, leaving the disorder to run its course and wear itself out by its own violence. On several of these occasions I was attacked with sickness and vomiting, accompanied by acrid bilious discharges from the bowels; and these evacuations were followed by immediate relief as to every local and constitutional symptom. Sometimes the result was an entire cessation of the paroxysm; at other times the alleviation was more partial; but repeated experience convinced me that the degree of relief obtained was always proportioned to the copiousness of the bilious evacuations. Pursuing this hint given me by nature, when the spontaneous diarrhœa has been too scanty I have assisted it with five grains of calomel. These in a few hours produced copious bilious discharges; the gout departed, and I was well again.

The conclusion forced upon my mind by these facts, recurring again and again during a period of so many years, is, that not to the stomach or the kidneys, or to the impaired functions of any other viscus than the liver, is the cause of gout ascribable.

In corroboration of this view I may appeal to the character of all those medicaments which at various times have been held in estimation as specifics against gout. One property is common to them all—namely, that of strongly stimulating the hepatic functions. The *eau médicinale*, which was introduced into this country about twenty years ago

from France, was a remedy of this class. It was sold in one-drachm bottles (this was the dose), and its effects were certainly very remarkable—frequently removing the most painful attacks of gout in one night. The composition of this potent nostrum long remained a secret; it was conjectured to contain white hellebore; and I recollect the physicians of the Westminster Hospital prescribing a vinous infusion of the latter, in one-drachm doses, with great success, as a substitute for the eau médicinale. The revived use of colchicum or meadow saffron, which I believe to be the essential ingredient in the eau médicinale, has put us into possession of an invaluable antidote to gout; but how does this colchicum act beneficially? Assuredly not on the stomach, which it nauseates; assuredly not on the heart or circulation, which it distresses: but it acts on the secretions of the liver; and long personal experience has taught me that until the functions of that organ are called into vigorous play, the colchicum is worse than useless.

Latterly it has been my practice to use colchicum in combination with other medicines. When I was in the habit of taking it singly, my dose was generally about sixty drops of the wine of the seeds, repeated every six hours. After three or four such doses the bowels were acted on; the evacuations had the odor of colchicum; deeply tinted scalding bile was passed, and I was well, for I needed no more.

Now, if a spontaneous evacuation of bile operates critically to the relief of the gouty paroxysm; if five grains of calomel produce relief; if just so much colchicum or other medicine produces relief as is sufficient to cause a copious discharge of bile, then is it demonstrated that the diminished or altered state of the hepatic secretion, which is always a concomitant of gout, is not to be classed among the secondary phenomena of that disease, as pathologists have hitherto invariably supposed.

Let A and B be any two phenomena whatever; and suppose that B is never found except in company with A; then will there be reason for concluding either that one of the two is the cause of the other, A of B, or B of A, or else that both are parallel effects of some third principle. But suppose it be found that, whereas B never presents itself unaccompanied by A, yet A may exist without B, and that, when both are present, the removal of the former is invariably followed by the disappearance of the latter, then it will be manifest that A is the cause of B.

The correctness of this abstract reasoning will, I presume, be admitted without question. To apply it to the subject of our present inquiry, we have only to substitute for A and B, the phrases "impaired functions of the liver," and "paroxysm of gout."

No writer that I am aware of has ever propounded, or even surmised, the doctrine that the proximate cause of gout is a functional disorder of the liver; and I cannot overcome the astonishment that possesses me when I think that it should have been reserved for me to make such a discovery. The principle, when once divulged, appears so plain and obvious, that it is wonderful it should have been overlooked so long. Such has been the feeling expressed by several of my professional brethren to whom I have communicated my views. Seldom have my conclusions

failed in such instances to receive a prompt and full assent, and to elicit from each of my hearers the exclamation, "How is it possible I never thought of that before." But the history of science is full of examples, showing how inquirers have for ages been shut out by the filmiest barriers from the acquisition of precious truths.

The derangement of the liver which always accompanies the gouty paroxysm, and manifests itself by unequivocal signs, such, for instance, as the pale color of the fæces, is too obvious to have escaped notice. Accordingly, writers on the disease have constantly adverted, more or less prominently, to this pathological fact; but they have all failed to assign to it the position it really occupies in the train of symptoms. The tendency of their speculations has generally been to consider the disorder of the liver as consequent upon that of the stomach, whereas the converse doctrine is far more consonant with observation and with physiological principles. Acidity in the stomach is an unfailing element in the gouty diathesis. Now such a condition of that organ may, undoubtedly, react on the liver, and impede or vitiate its secretions. On the other hand, we know that a very important office performed by bile is the neutralization of the free acid, which is always developed in the stomach during healthy digestion, and is, therefore, a constant ingredient in chyme; only assuming a morbid character when it is excessive or otherwise abnormal. Hence, given two coexisting facts—acidity of stomach, and deficiency or faulty composition of bile—it will be natural to surmise that the former is the effect of the latter, and nothing less than specific proof could justify our adoption of the opposite conclusion.

It is a fact of great importance to the decision of this question, that, however the administration of antacid medicines may alleviate the heartburn and the other distressing effects of acidity in the primæ viæ, such remedies never rise above the rank of palliatives in the treatment of gout. They have not the least efficacy in restoring the healthy action of the liver; whilst, on the other hand, whatever accomplishes that object never fails to remove every other dyspeptic symptom likewise.

The liver, then, is the *officina* in which is elaborated the *materies morbi*, on which the whole train of gouty symptoms are dependent. What may be the precise nature of that poison I do not pretend to determine. That remains an interesting subject for future inquiry, to which I may venture to hope that I have given a fresh impulse and an increased prospect of success, by defining its proper point of departure, and the direction it should take. The one new leading fact which I affirm as demonstrated, is sufficient to indicate very distinctly the mode of treatment which offers the only rational hope of removing the gouty diathesis, and also to explain the success which has partially attended the various empirical methods which have been adopted for the cure of the disease.

The main object to be pursued towards the effectual cure of the gouty paroxysm, by the removal of its immediate cause, is the restoration of the natural functions of the liver, as indicated by a copious discharge of bile through the bowels. This object may be attained, more or less promptly and sufficiently, by the administration, either of calomel or

colchicum, or of some other potent deobstruent of the hepatic system. But here, as in other instances familiar to the minds of my readers, the principle of combining analogous remedies will be found strikingly advantageous. My own practice has long been to rely exclusively for the cure of gout on the following prescription, the effects of which should be carefully watched by the medical attendant:—

℞. Hydr. Chlorid.
Ext. Colchici Acet.
Ext. Aloes purificati.
Pulv. Ipecac. aa. gr. j.
M. et fiat pilula quartis horis sumenda.

Two or three of such pills are generally enough to produce a considerable disgorgement of the liver, which I then assist with one or two doses of the compound decoction of aloes. By this time the gouty paroxysm has either ceased, or there is a marked subsidence of all its distressing symptoms. The pills may then be administered at longer intervals, varying from eight to twenty-four hours, according to circumstances.

The treatment I have above described possesses the cardinal and paramount requisite of being effectual to the end proposed. In addition to this, it is important to know that the combination of calomel and aloes with colchicum, while quickening and corroborating the specific action of the latter on the liver, seems also to neutralize all the noxious properties of that hitherto formidable medicine.

In conclusion, I repeat, that what is called a fit of gout, is only a peculiar manifestation of a functional disorder of the liver; and that whatever brings about a free evacuation of bile puts an end to the gouty paroxysm.

Having assumed, in the above tract, that the cause of gout is the effect of poison generated *eventually* in the liver by an imperfect assimilation of food, or indigestion, I cannot refrain borrowing from my highly learned and intellectual friend Dr. Watson, an observation which I take the liberty of quoting from his "Lectures on the Practice of Physic," vol. ii., p. 641 :—"I need not remind you of the various ways in which extraneous matters find entrance into the blood. Poisons, under their proper shape and name; medicines, which, misapplied, become poisons; our natural food and drink, which the folly of man converts into poison; the products or dregs of the secondary assimilative process; these are common sources of impurities, more or less hurtful, which mix and circulate with the vital fluid."

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*Three Cases of Paracentesis thoracis in Pleurisy; two of which were successful.* By Dr. Joseph Beyran.—Dr. Beyran is in favor of puncturing the thorax at a comparatively early period in pleurisy. He sometimes employs a trocar, sometimes a bistoury; the latter plan he prefers when the subject is fat or muscular. The three cases to be

related occurred in Constantinople; two of them in a hospital there, to which Dr. Beyran is attached.

Case 1. Margos, aged 28, a sawyer, exposed to alternations of heat and cold, was seized with pleurisy on February 3d, 1851. On the 9th he was admitted into the hospital, with signs of effusion in the right pleural sac. On the 11th, the respiration becoming more and more impeded, Dr. Beyran punctured the thorax between the seventh and and eighth ribs, by means of the trocar of M. Reybard. Six and a half pints of transparent serous fluid escaped. A piece of diachylon plaster and a bandage were applied. After the operation he gradually recovered, and was discharged cured on February 26th; and has since remained well.

Case 2. Serpoulic, aged 32, a washerwoman, had been ailing for some days, with a pain in the left side of the chest, when she accidentally burnt her legs on April 13th, and was brought to the hospital. The next day, the most urgent symptoms were those of extensive effusion into the left pleura. Blisters and diuretics were used, without effect. On the 16th, as the patient was threatened with suffocation, Dr. Beyran punctured the thorax. The patient being fat, an incision was made first down to the ribs, until fluctuation was distinctly felt with the finger; the bistoury was then introduced, and five pints of yellow transparent fluid were removed. The flow was then suddenly arrested to prevent the access of air; plasters, graduated compresses and a bandage were applied. In half an hour the stroke-sound was normal, except at the lower part; and the respiratory murmur could be heard. The patient was calm. The next day she was much better; and on August 18th she left the hospital completely recovered.

Case 3. Dr. Beyran was called in consultation in the case of Mlle. M. Narisen, who was seized on December 2d, with pleurisy of the right side. He saw her on the 12th, when he diagnosed effusion into the right pleural sac. The patient also had tenderness in the hypochondria and epigastrium, with nausea and vomiting. Dr. Beyran recommended paracentesis; but could not prevail on the other medical attendants to have it performed until several days after. It was then performed, when suffocation was imminent, by puncture with a bistoury. The patient appeared relieved for a time, but died exhausted in eight hours after the operation. Before her death, she complained of much pain in the region of the stomach.—*Lond. Journ. Med.*

## SURGERY.

*On the Diagnosis of Chronic Ovarian Tumors.* By E. J. Tilt, M. D., Senior Physician to the Farringdon General Dispensary and Lying-in Charity, and to the Paddington Free Dispensary for Diseases of Women and Children.—At different times we have published, in the *Lancet* and in the *London Medical Gazette*, a series of papers on the "Pathological Anatomy of Chronic Ovarian Growths, and on their

Cause, Progress, and Termination." We now propose treating of the diagnosis of these tumors, and feel no little hesitation in beginning a chapter which must be the history of the mistakes daily committed, even by the most enlightened.

The difficulties of the diagnosis of chronic ovarian tumors arise from the form and nature of the cavity in which the abdominal viscera are contained. The more easily defined limits of other organs render the diagnosis of these diseases comparatively easy; but it was necessary, for the health of the body, and to economise the space allotted to the abdominal viscera, that they should have no fixed limits, in order that they might, in their periodical ebb and flow, appropriate each according to its peculiar wants more or less of the same cavity. This community of habitation entails a certain obscurity of position, and gives rise to a corresponding obscurity of diagnosis of the diseases of the abdominal organs. With other organs we find that any obscurity of diagnosis which might have existed in the origin, diminishes as the disease progresses, but the certainty of the diagnosis of ovarian tumors does not increase in proportion to their dimensions, because each of the neighboring viscera—womb, liver, spleen, kidney, and bladder, are susceptible of attaining to a similar bulk, and these organs must, therefore, be believed to be in a healthy state by the medical attendant, before he can diagnose an ovarian tumor.

Another difficulty of abdominal diagnosis arises from the fact, that the abdominal cavity, more than any other, harbors not unfrequently tumors of stupendous size, which have no other origin than some minute sub-peritoneal cell. In such cases we need not be surprised that a tumor, which belongs to no organ, should be, by different medical men, attributed in turn to a swelling of each of the abdominal organs in the vicinity of which it is developed.

It may be thought that we exaggerate the uncertainty of abdominal diagnosis, but we do not hesitate to say that it is more difficult to diagnose many complaints of the organs contained in this cavity than those of the chest or the head. Medical men have sometimes brought us patients said to be affected with ovarian dropsy, but who were in reality suffering from fibrous tumors of the womb, chronic peritonitis, or even *embonpoint*, particularly when the patients have arrived at the age of cessation of menstruation. All those who are engaged in active practice must be able to recall similar proofs of the great imperfection of abdominal diagnosis, and the operations of ovariotomy furnish us with wholesale examples of the errors of diagnosis made by the most eminent in our profession; errors made by men who have specially studied ovarian disease, and the individual cases of that disease which they attempted to cure radically by an operation, on the value of which they staked their medical reputation. Dr. Dolhoff, at Magdebourg, had studied his patient's case for a year; many eminent men who had seen the patient with him were convinced of the existence of a tumor, and still none was found when the abdomen was opened. The best opinions of Edinburgh confirmed Lizars in his opinion, that a patient of his was affected with an ovarian tumor. An operation was performed, but no

tumor was found. We learn from Dr. Atlee's valuable table, that out of 179 cases of attempted ovariotomy, the operation could not be completed in 34. This means in plain English, that in 34 out of the 179 the surgeons made an unfortunate error of diagnosis. In 17 of these cases other important diseases existed, which would have contraindicated ovariotomy, but as these were not detected by the surgeon, the 17 operations were performed, and occasioned the death of 14 of the patients. Adhesions of the tumors to neighboring organs are also considerable complications when they are extensive, as was the case in 62 operations out of the above mentioned 179. In other words, these 62 cases were also errors in diagnosis; for if the surgeon had suspected the existence of these adhesions, he would, in most of the cases, have declined operating, well knowing that this complication increased the difficulties of the operation, increased the ratio of its mortality, and sometimes rendered it impossible. In six cases, says Dr. Atlee, (but two others are recorded,) no tumor was found, so that in these patients the abdomen was opened, it was examined for a tumor, and none was found, and then the abdomen was sewn up. The 179 operations of ovariotomy thus afford us proof of 121 errors of diagnosis.

While, however, admitting the imperfection of our diagnosis of abdominal diseases, we must not omit mentioning that some of our means of diagnosis have lately been improved, and that others have recently been added, which, if judiciously used, permit us to anticipate a diminution of what has been well termed "ovarian perplexities."

In Professor Piorry's hands Avenbrugger's discovery has been proved to be equally serviceable in detecting diseases of the abdomen as those of the thorax. Kergaredec applied his uncle's stethoscope to the abdomen, and taught us to distinguish a sound, by which, if distinctly heard, we can be confident of pregnancy. And later still, the head of the obstetric department of our profession in Scotland, Dr. Simpson, has given us a very important instrument of diagnosis—the uterine sound, by means of which we are generally able to eliminate the uterine element from very complicated problems of abdominal morbid structure. This instrument has indeed been inveighed against, with considerable force, by some who have been peculiarly struck by cases wherein the instrument was injudiciously employed, but as a help to diagnose abdominal disease, it is undoubtedly of great utility, a conviction expressed with the greater pleasure, because we differ in some other points of practice with its illustrious inventor.

Having shown the difficulties of abdominal diagnosis, having pointed out the reason of these difficulties, and glanced at some of the means by which they may be diminished, we shall now proceed systematically in our attempt to unravel the obscurity which we deplore. Our idea of diagnosis is to distinguish some peculiar disease from all those with which it may be confounded, we shall then proceed to pass in review, one after the other, all the diseased organs with which ovarian tumors have been confounded, or, in other words, all the abdominal viscera.

Should the reader find that we are tedious in the inquiry, let him remember that in learning to detect ovarian tumors he unavoidably learns

to discover the other tumors or diseases of the structure which so frequently occur in the abdomen, and that he will thus acquire a knowledge of abdominal disease, the obscurest and the most important part of medical diagnosis, for the viscera of nutrition are those principally affected in all diseases. Let him remember that the rarity of any peculiar disease should not be an unconquerable obstacle to the sagacity of the practitioner, who knows how to *seek* for the signs of disease and how to interpret them. Acquainted with the anatomy of the visceral organs, and conversant with their functions, the medical attendant should be ready to interpret those rare cases which, in the course of practice, may perhaps "turn up" to-morrow.

Chronic ovarian tumors have been confounded with ovaritis, on account of the extraordinary size of the acutely-inflamed ovary, but the rapidity of the development of the tumor, and the fever by which it is attended, will not permit the practitioner to be easily deceived; and the rapidity of the march of the disease will soon show the disease to be acute. On account of the acute march of an ovarian cyst, it may, however, be confounded with ovaritis. In the *London Medical Gazette* we have related an interesting example of this; the fever was such as attends acute disease, the iliac pain was intense, the swelling rapid, and we should have remained convinced that the tumor was of a purulent nature, if an exploratory puncture had not been made, and a transparent albuminous fluid withdrawn. A careful examination of the patient could alone prove that, in such cases, the ovary is affected, the knowledge of the nature of the tumor being left to be determined by the subsequent history of the case, a delay little to be regretted, as in both cases the indications would be the same, that is to say, to arrest the progress of inflammation by bloodletting and mercury. Ovarian tumors have been confounded with pelvic tumors, sanguineous or purulent, developed in the recto-vaginal pouch. By means of the uterine sound it is easy to eliminate the uterus from the morbid problem, but it is sometimes difficult to distinguish an incipient ovarian from a pelvic tumor, in cases similar to those described by Dr. Seymour, where the falling of the ovarian tumor into the recto-vaginal pouch gives rise to excessive pain. A few days will generally suffice to clear up the difficulties of diagnosis, for while the distressing symptoms attendant on the position of the tumor diminish, or at least do not increase, the constitutional symptoms will increase if the tumor be purulent, and it will most likely point towards the vagina, the rectum, or the skin, in the inguinal region. In very rare cases, however, it may happen that a purulent tumor attains a large size in the recto-vaginal pouch, without the difficulty of diagnosis being diminished, as when they imitate those ovarian tumors which are quite round, central, painful, and bulge into the vagina. In a very interesting case, recorded at great length, by Dr. Camus, (*Revue Medicale*, 1838,) the patient would certainly have been considered to be suffering from ovarian dropsy if it had not been known that the disease originated in the culpable introduction of an instrument into the womb to procure abortion. The tumor took several months to attain the umbilicus. In this case an obscurity in the diagnosis was not much to be regretted as

it did not increase the difficulty of the treatment. The indications were similar in the event of either disease, and a vaginal puncture of the bulging portion which did cure the abscess, might also have radically cured the ovarian cyst, as has happened in many an instance.

*Sanguineous pelvic tumors* are more likely to be confounded with incipient ovarian tumors, and as they have not been described by classic authors and have been but lately investigated by French pathologists, it may be well to glance at their history. In the midst of menstrual disorders, consisting in the flow being more or less abundant and painful than usual, intense hypogastric pain arises with fever, which lasts a few days, then ensues a dull heavy bearing down pain in the hypogastric region, and a large collection of blood forms in the recto-vaginal pouch, which, by pressing the rectum in and against the concavity of the sacrum, gives rise to obstinate constipation, whilst by pressing the urethra against the pubes, the same tumor causes a difficulty or impossibility of passing water. At first fluctuation may be easily detected in this tumor, but when the blood coagulates it becomes hard, and in one instance was mistaken by Malgaigne for a fibrous tumor of the womb. The tumor often disappears by resolution, or else it may open and discharge its contents in the vagina or the rectum.

These details are sufficient to show that when ovarian cysts are so confined by false membranes, as to be developed in the recto-vaginal pouch, it may be difficult to distinguish them from sanguineous pelvic tumors, but the more rapid growth of the latter and their early fluctuation, enable the practitioner to form a correct opinion, and time will give certainty to the diagnosis.—*Prov. Med. and Surg. Journ.*

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*Entropium Proved to Depend on Muscular Action.* By HAYNES WALTON, ESQ., F. R. C. S., Surgeon to the Central London Ophthalmic Hospital, and to St. Mary's Hospital, Paddington.—I have founded the treatment on what appears to me to be the pathological interpretation of the affection, and of which the indications are, to overcome the means of inversion by dissecting away the thick marginal portion of the orbicularis, supposing that part of the muscle to be entirely, or nearly all that is at fault, and also to remove as much of the skin of the lid as may be required by its loss to produce such tension as shall overcome and restore to a natural state, whatever unnatural position the other tissues or component parts of the lid may have acquired, from the irregular position into which they have been thrown by the muscle, and which has been made more or less permanent by such changes as inflammation would produce.

Now, as to the manner of operating: let us suppose that the right eye is to be done. An assistant stands behind the patient, and having made the lid tense by drawing it outwards and raising the brow, two incisions are made through the skin and muscle, one along the edge of the tarsus close to the cilia, and the second about the quarter of an inch above, and meeting the other at the extremities. The flap thus isolated should be dissected vertically from the one side to the other, and not

taken away by horizontal strokes of the knife, or else the muscular portion will not be effectually removed. The wound should be very carefully sponged during the operation. Any arterial jet must be checked by temporary pressure with the finger. I have never found a ligature to be necessary. The exposed surface must be inspected, and, if any muscular fibres have escaped, the forceps and knife must be re-applied. The assistant should not desist until the knife has been laid aside, for the proper retraction of the skin is essential to steady and effectual dissection. Three or four sutures should be used. The cilia might appear to be in danger of being dissected off, but in reality they are not. A part only of the dissection is over them, and by the loose cellular connexion, the muscle is readily raised from the dense fibro-cellular tissue in which they lie.

The previous observations almost demand a cursory view of the usual methods of operating, and their results; indeed, I think this paper very imperfect without it; yet I fear that its introduction would make my communication too long. I must be satisfied with making the assertion, that there is not any known method of operating for entropium, that can be depended on, except that of cutting off the greater portion of the lid, and which is as bad in principle,—nay, even worse, if the physiological relations of the lid be taken into account,—as to amputate a thigh to cure a popliteal aneurism.

Heretofore, when an operation for entropium has been undertaken with the design of removing any part of the orbicularis palpebrarum muscle, it has been executed on very different principles, and in a very different manner to that I now advocate, and with very different results. The marginal part of the muscle, the musculus ciliaris, has been untouched, and only a bit of the centre of that on the lid has been snipped out. The only exception I know of is in the practice of Mr. Key. I am astonished that the notice of the operation he performed, and which is in the *Lancet* for 1825, page 235, should have escaped the attention of our writers on ophthalmic surgery. It is very lately that I have been acquainted with it, long after I had matured my own views. I cannot say whether Mr. Key continued to execute it, and what were his ideas on the subject in later years. The report runs thus: Mr. Key considered the inverted state of the tarsus to arise from the action of the orbicularis palpebrarum muscle. With that view he determined on laying bare the substance of the lower tarsus, and dissecting off the fibres of the orbicularis. The operation was performed by first turning out the lid, and then making an incision through the skin along the whole length of the lower eyelid, at a few lines distance and below the ciliary ridge; the integuments were carefully elevated by means of dissecting forceps, and the fibres of the orbicularis thus exposed were as carefully removed; there was considerable bleeding from the parts; the portion of skin which had been raised was laid down, and the wound dressed by means of adhesive straps, with a compress applied on the skin. The result is said to be successful. Mr. Tyrrell and Mr. Travers had operated previously, the first by cauterisation, the second by removing a portion of skin without success.

M. Desmarres has not overlooked the influence of the orbicularis in producing the inversion, and he gives a case that he thinks solely due to it; but he does not recognise its general operation, and he significantly indicates how little he appreciates the principle of Mr. Key's execution, and the triumphant issue of the case, by asking, in a commentary on the proceeding, "Is it to the incision of the skin, or the excision of the muscle, that the success is owing?" Spasmodic action of the muscle is spoken of by foreign authors, but with much difference of opinion concerning its frequency in producing entropium. The usual Continental mode of operating on the orbicularis is subcutaneous incision, which seems to have been unsuccessful; that of M. Janson de Lyon is a terrible affair, the cutting out of several vertical portions of skin, including some fibres of the orbicularis. Dr. Mackenzie, in his only notice of operating on the muscle, informs us, that it may be proper, after removing the cutaneous fold, to snip off a few fibres, so as to form a firmer cicatrix, actually fixed to the cartilage; and Mr. Lawrence, a much later author, echoes the same thing, for he writes, "In an incipient case, it may be sufficient to excise a portion of skin; this remedy will, at least, answer the purpose for a time. To make the operation more effectual, a portion of the orbicularis should be removed also, that a firmer cicatrix may be produced; or the acid may be employed, using it more freely, so that its action may extend deeper, and a solid scar be the result."

A narration of cases, with the various symptoms and terminations of entropium, must be excluded from this paper, which is intended to embrace only general principles.

As trichiasis commonly exists with entropium, and the operation I have advocated bears on the united affections, I shall say a few words relative to it.

With inversion of the upper lid, there is not unfrequently decided trichiasis, and, whether the two are due to the same exciting cause, or the trichiasis have been the original affection, or merely an effect of the inversion, it matters nothing as far as the treatment is concerned; yet it may not be amiss to remark, that, with severe entropium, the edge of the lid can rarely for any length of time escape from being affected by the general inflammation, and that the cilia will the more readily retain any unnatural position in which they may be placed. And I am inclined to regard the trichiasis more frequently as an effect, because it is generally of one form, that of a separation or twisting in of the innermost of the cilia from their fellows, and that without any alteration or degeneration in the individual hairs, and because the removal of the entropium is generally sufficient to clear the globe of them. Although, practically speaking, such a degree of trichiasis matters little, it is important, before operating for the entropium, to ascertain whether there is also trichiasis, and whether the restoration of the lid to its natural position will or will not counteract the mal-direction of the cilia. Should it not be sufficient, then more skin must be taken from the lid than would otherwise have been necessary, and a slight degree of eversion of the centre of its edge produced, and which must necessarily have its limit.

When it is apparent that such moderate eversion will not suffice, the treatment must depend on the degree of the trichiasis; if it be general, the entropium and it must be attacked by one operation. The cilia must be excised at the same time, that a sufficient extent of the skin of the muscle should be removed. But when the trichiasis is partial—and, for the most part, it is—the muscle should first be dissected away, and then the irregular cilia removed. When there is doubt about the necessity of removing them, attend to the entropium alone, and observe the result, because it is not always possible before the operation for the entropium has been done, and the lid recovered from it, as well as from any inflammation and swelling that the entropium may have induced, to ascertain with exactness to what extent the trichiasis may be benefitted. If, as is commonly the case, a patient applies to be treated for entropium, with many of the cilia broken, and some just about to be restored after having been plucked out, it cannot be known what direction they may assume when growing out; and such cases should be watched.

It can be very seldom that the removal of entropium from the lower lid does not at the same time separate any irregular cilia from contact with the globe, for a single exception only has occurred to me.—*Dublin Medical Press.*

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*Ligation of the Primitive Iliac Artery.*—In the *New Orleans Medical and Surgical Journal* for May, is reported a case of an Irishman, aged twenty-five years, who was admitted into the Charity Hospital for aneurism of the left femoral and external iliac arteries. On the 27th of March, Dr. A. J. Wedderburn ligated the primitive iliac. During the operation "severe hæmorrhage took place;" and it was found that the aneurism extended to within one inch and a half of the bifurcation of the primitive iliac artery. No chloroform was administered, and the patient complained much during the operation. On the 29th, evidence of gangrene below the knee existed. On afternoon, the 31st, the patient died—gangrene having extended as far as the hip. Post-mortem examination revealed thickening and degeneration of the tissues about the seat of the ligature, together with enlargement of the lymphatics. Dr. Wedderburn is disposed to question the success of this operation in any case; and he doubts if a cure has ever followed this questionable operation.—*New York Journal of Medicine.*

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*Mr. Barnard Holt's Stricture Dilator.*—Stricture, in all its forms, constitutes one of the most interesting varieties of lesion which the surgeon is called upon to treat; and although its origin and the minute anatomy of its early stages, have not yet, in some points, been fully explained and examined, yet a thorough and comprehensive knowledge of the treatment of it forms an indispensable branch of study for the practical surgeon.

Being confined to no one locality or class of patients, as well as being one of the most common forms of disease, it may call for aid in districts where little opportunity for studying surgery is afforded; while it may, and often does, severely tax the patience and skill of the great hospital surgeon.

As it is generally neglected by the patient till the last moment, and as no one of the various modes of treatment recommended seems available in all cases, the most energetic attempts have been made to arrive at sound conclusions, as well as to improve upon the instruments generally employed to dilate the contracted part of the canal. Among the latter, we may fairly notice those introduced to the Profession by Mr. T. Wakley.

Notwithstanding the advances made, great disunion of opinion prevails among the Profession as to the treatment of stricture, as was well illustrated at a meeting of the Medical and Chirurgical Society, held on the 13th of April of this year. A paper was read by Mr. Cock, containing the results of the treatment of stricture by puncture of the rectum. An elaborate and highly interesting discussion followed, in which nearly every speaker dissented from the views of those who had preceded him. Such discussions as these are of the greatest service to the Profession, and show how just a view the founders of them took respecting the steps then necessary for the advancement of science. They tell us where advances are made, and converts gained,—where opinions are still divided, and how objections might be raised or met; thus giving us, in one clear and condensed view, a summary of the opinions of some of the greatest surgeons and physicians of the day; opening up fresh sources of knowledge, and bringing to light facts and opinions which otherwise might die with their possessors. Hence the records of these societies and their debates may be consulted as storehouses of information, the value of which it is impossible to overrate, and the place of which no books or lectures can ever supply.

To enter into a full discussion of the various modes of treatment adopted in stricture would be here impracticable, and, if practicable, would be quite out of place. What occupied practised debaters some hours, could not be properly examined in the columns of a journal, nor appropriately appear in an article the functions of which are strictly limited to recording the discoveries of our hospital surgeons and physicians. We shall, therefore, proceed at once to the consideration of the subject in hand,—Mr. Holt's new instrument for the treatment of stricture, or, as the inventor has named it, the stricture dilator.

This extremely ingenious instrument is, Mr. Hall says, a modification of that contrived by Perreve. It consists of a tube like a catheter, split up to the extremity, where the two halves are welded together. Running through its whole length is a directing-rod; over this directing-rod can be passed a series of tubes of increasing calibre; thus affecting the slightest to the most extensive degree of dilatation. When the small closed tube is passed through the stricture, the sounds can be passed in succession, till the highest point is attained to which the surgeon wishes to go; and, as they are passed over the guiding-rod, and down the interior of the first instrument passed, it follows that all this dilatation may be attained without disturbance to the stricture. Here, then, may be said to be in some measure combined all the advantages which other instruments have ever offered. Steady, uniform dilatation, while the urethra is not irritated by renewed friction; the absence of any neces-

sity for attempting to find again the difficult route; a continuance of the curative application, and thorough safety. The "stricture dilator" may therefore be fairly looked upon as a valuable addition to the means of treatment we possess. The following case will tend to show how satisfactorily it acts:—

J. G., a carpenter, aged 41, living in Lambeth, was admitted Jan., 1851, into Westminster Hospital. He gave the following account of his case. He had laboured under stricture twelve years. He knew of no cause for it, as the last gonorrhœa he ever remembers having suffered from had occurred eight years previously; but those who know how insidiously stricture springs up, and how obscure its origin is, will know how to appreciate these facts. However, having long suffered from it, he went at last to a surgeon, who attempted to introduce an instrument, but could not pass it more than two inches down. Considering it a very bad case, he recommended the patient to go into the hospital.

When admitted, the stream of urine was very narrow, not being thicker than a wire or knitting-needle, and no instrument could be passed into the bladder. An abscess formed in the perinæum, which was opened by Mr. Phillips. The patient was then transferred to the care of Mr. B. Holt, who commenced treating him with his stricture-dilator, Feb. 5, 1852.

Nothing larger than No. I could be passed at first. This, however, was got through every other day, but, owing to the appearance of some irritability and hæmorrhage, nearly a week's intermission in the use of instruments took place. The fourth time this dilatation was tried, the canal was found so much widened, the dilatation could be carried so far that a No. 6 was admitted. After this period, dilatation was steadily continued till towards the close of the month, when this report was drawn up. At this time, No. 9 could be passed with ease.

The man seemed very much pleased with the results of this treatment. The pain had been considerable at times, at others slighter; the abscess soon healed up, and the patient's health improved, especially as he could retain his urine in the night instead of being obliged to rise a dozen times to void it. These are satisfactory results in so short a time, and in a case where nearly the whole line of the canal was strictured.—*London Med. Times.*

## CHEMISTRY.

*The State in which Oxygen exists in the Blood.*—Liebig, in the *Chemisch-Pharmaceutisches Central-Blatt*, Dec. 1851, has published a memoir on this subject, in which he combats the opinion that oxygen is not chemically combined with, but is simply absorbed by the blood; a belief grounded on the fact of the expulsion of the absorbed oxygen by a current of carbonic acid passing through the liquid. The author denies the correctness of this inference on the following grounds: 1000 volumes of water, according to Gay-Lussac, when saturated with atmospheric air, absorb 9·25 volumes of oxygen, and 18·5 volumes of nitro-

gen; whilst, according to Magnus, 1000 volumes of blood absorb from 100 to 130 volumes of oxygen, and 17 to 33 volumes of nitrogen; therefore blood absorbs from eleven to fourteen times more oxygen than water does, which absorption must necessarily depend upon the existence in the blood of some particular substance, possessing a far stronger affinity for oxygen than water possesses. It does not follow because the the affinity of this principle in the blood for oxygen is but weak, that no chemical combination exists between them. One per cent. of phosphate of soda in water, doubles the absorbent power of the water for carbonic acid gas; sulphate of iron in solution dissolves forty times more than a similar bulk of pure water can; and both these solutions again part with their absorbed gases, when placed *in vacuo*, or by agitation of the former with air, the latter with carbonic acid; so that the conclusion is obvious, that saline solutions possess (*may possess*) greater absorbent powers than pure water—a conclusion which applies to the blood.

The absorbent power of a liquid for gases, depends either upon the pressure maintained, or the affinity of that liquid, or of one or more of the constituents of that liquid, for a given gas. Were the oxygen of the blood simply absorbed, it must take up from the air, which itself contains but one-fifth of oxygen, twelve per cent. of this gas; double this amount under twice the pressure; treble under thrice this amount of pressure; and five times the quantity if shaken with pure oxygen. It has not yet been proved that the absorbent power of blood varies with the amount of atmospheric pressure. Regnault and Reiset have demonstrated that animal life can be maintained in an atmosphere abounding with oxygen; and it is well known that in the neighborhood of Lake Titicaca, at an elevation of 12,600 feet above the sea level, 15,000 persons, and that at Potosi, an elevation of 12,600 feet, 30,000 persons live and breathe every whit as well as the inhabitants of the coast; facts which militate against the supposition that oxygen is merely *absorbed* by the blood; for as absorption is dependent upon pressure, the amount absorbed at different elevations would be dissimilar, which must necessarily exert considerable influence on the vital action in the mountaineers, or on the dwellers on the sea-shore—a conclusion utterly opposed to observation.—*London Journal of Medicine.*

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*Antidote for Cupreous Salts.*—M. Roncha, of Strasburg, states that calcined magnesia completely checks the symptoms occasioned by poisoning with sulphate of copper, if taken quickly after the copper salt; but it requires a large quantity of magnesia, eight times the weight of the sulphate of copper, to neutralise the effects of this salt. It is stated as probable, that magnesia will prove one of the best antidotes to cupreous salts, a statement in which at present we should be sorry to express our acquiescence.—*Ibid.*

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*Test for the presence of Mercury.*—If a strong solution of iodide of potassium be added to a minute portion of any of the salts of mercury, placed on a sheet of bright copper, a white metallic silvery stain will be

developed, which cannot be mistaken, as no other metal presenting a similar appearance is deposited by the same means. In this way corrosive sublimate may be detected, in a solution unaffected by potash or iodide of potassium. In a mixture of calomel and sugar, in the proportion of one of the former to two hundred of the latter, a distinct metallic stain will be detected with one grain of this mixture, containing but 1-200 of its weight of calomel, and the binoxide of mercury can be thus detected, if mixed with 400 times its weight of sugar. This valuable test we owe to Mr. Arthur Morgan.—*Ibid. from Annals of Pharmacy.*

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*On the Examination of Ointments containing Oxide of Mercury.* By M. ROBIERRE.—Having had occasion to examine some citrine ointments employed by a woman who was accused of illegally practising medicine, I experienced some difficulty in ascertaining the chemical characters of the metallic substance present, in consequence of the small proportion of it contained in the ointment, and also in consequence of the ointment being very old. The following method of operating proved so successful, that I am induced to record it for the benefit of those engaged in such investigations. It serves to isolate mercury in a few minutes from its combination with oxygen and fatty acids. However small the quantity of mercury present may be, the effect is, nevertheless, distinct.

The ointment to be examined is melted by the application of a gentle heat, and a small quantity of the essence of citron is then added to it. Under the well-known reducing influence of this hydro-carbon, the ointment acquires a grey color, which effect is to be promoted by agitation. After about five minutes, the ointment being still kept melted, three times its volume of ether is to be added, the whole mixed together, and then allowed to stand. The supernatant liquid is then to be decanted, and the residue washed several times with ether. The mercury left at the bottom of the vessel may now be dissolved in nitric acid, and tested with the usual reagents.—*Journal de Chimie Médicale.*

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*On the Hydrated Peroxide of Iron and Magnesia as Antidotes in Poisoning with Arsenic.* By J. HAIDLEN.—The author has satisfied himself by experiments, that to completely precipitate 1 part of arsenious acid within five minutes by hydrated oxide of iron, 22 parts of the latter are required. Some which had been kept for a year had lost more than two-thirds of its power; in another case it had lost one-third of it. As it is well known, on account of this property of the hydrated oxide of iron, Fuchs has recommended the mixture of a solution of persulphate of iron, which yields from 17 to 18 per cent. of the hydrated peroxide dried at 212° F., with excess of caustic magnesia. In the Wurtemberg Pharmacopœia the mixture of perchloride of iron with excess of magnesia is prescribed. The author finds that both mixtures precipitate the arsenious acid equally as well as the pure hydrated peroxide of iron, so that there is no chemical objection to their use.—*Chem. Gaz.* May 1852, from *Jahrb. fur Prakt. Pharm.*

## MATERIA MEDICA AND THERAPEUTICS.

*On Guaraná.* By D. RITCHIE, Esq.—Guaraná is a substance used in Brazil as a medicine. It is prepared from the seeds of the *paullinia sorbilis*, a sapindaceous plant. The masses of which it consists are cylindrical or spherical, hard, uneven, brown or black on the surface; fracture conchoidal, unequal, resinoid; color reddish brown, like chocolate. It is liable to be adulterated with cocoa or mandiocca flour. Chemical analysis shows the presence of tannin, caffeine and guaranine.

The medicinal properties have been examined by M. Theodore Martius, and more particularly by Dr. Gavrelle, who was physician to Don Pedro in Brazil. By the vulgar it is held to be stomachic, antifebrile and aphrodisiac; it is used in dysentery, diarrhœa, retention of urine and various other affections. It stimulates, and at the same time soothes the gastric plexus of nerves. It reduces the excited sensibility of the cœliac plexus, thereby diminishing febrile action, and strengthening the stomach and intestines, particularly restraining excessive mucous discharges, increasing the action of the heart and arteries, and promoting diaphoresis. It is therefore indicated in fever, or reduced vital power from cold or prolonged wet, grief, too great muscular exertion, depression of spirits, long watching, and also in colic, flatulence, anorexia, nervous hemicrania, or in a dry condition of the skin. It is contra-indicated in a plethoric or loaded condition of the abdominal viscera, and in determination of blood to the head. It is said to increase the venereal appetite, but to diminish the fecundating power. It is a valuable remedy in irritation of the urethra and bladder, succeeding venereal or attending organic disease.

Guaraná, in the state of powder, is given in doses of ʒj. three or four times daily, with water and sugar, or with syrup and mucilage, conjoined with an aromatic. A convenient form is the extract, made by treating guaraná with alcohol; it may be exhibited in the form of solution or pills.—*London Journal of Medicine.*

## OBSTETRICS.

*Removal of a Pessary after forty-one years' residence in the Pelvis.*—In the *Ohio Medical and Surgical Journal* for May, Dr. F. T. Hurxthal reports the case of a German woman, aged 73 years, who, in 1811, after a confinement, had prolapsus uteri; and upon consulting a midwife (in Germany) she introduced a ring into the vagina, which she said was made of wood covered with beeswax. It had never been removed, nor had she ever felt the least inconvenience from it, until, on the second day of an attack of pneumonia, whilst coughing violently, she felt some pain in the pelvic region, which increasing, was followed by an exceedingly fetid vaginal discharge. The pessary was removed with difficulty, by division of it by scissors. It was $3\frac{3}{8}$ inches in its diameter, and $2\frac{7}{8}$ in its transverse diameter. On removal, it presented the appearance of a roughened stone, in some parts over an inch in thickness. The recovery was speedy and complete.

THE

# MEDICAL EXAMINER,

AND

## RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. XCIV.—OCTOBER, 1852.

## ORIGINAL COMMUNICATIONS.

### *Experimental Researches applied to Physiology and Pathology.*

By E. BROWN-SÉQUARD, M. D., of Paris.

(Continued.)

#### XVII.—ON THE INFLUENCE OF THE TEMPERATURE OF A WARM-BLOODED ANIMAL UPON THE DURATION OF ITS LIFE WHEN IT IS ASPHYXIATED.

One of the most positive facts in physiology is that every animal needs oxygen in order to live. But if there is a complete uniformity as to the necessity of oxygen for all animals, there is also the greatest variety between the different species as to the quantity of that gas which is necessary for the maintenance of life. Very probably a great part of the physiological differences between different animals, comes from the difference in the quantity of oxygen absorbed by their blood in a given time. The most important cause of the differences existing between cold and warm-blooded animals, and between young and

adult animals, is to be found in the differences in the quantity of oxygen they absorb.

It is very remarkable that one of the principal laws relative to the anatomical differences existing between the different species of animals, appears to be also a law regulating their physiological differences. In an anatomical point of view, a mammal, at the different periods of its development, presents alternately the forms of many different beings. In a physiological point of view, a corresponding transformation occurs for the mammals. They exhibit alternately the same phenomena of life exhibited by many other different animals. For instance, before its birth, the mode of breathing of a mammal is the same as that of fishes. The oxygen absorbed by fishes exists in a liquid; the oxygen absorbed by the mammal fœtus exists also in a liquid, which is the blood of the mother. In fishes and also in mammal fœtuses, oxygen has to pass through many membranes: in fishes, through the mucous membrane of the bronchiæ and the membrane of the capillary vessels; in the mammal fœtuses, through the membranes of the capillary vessels of the maternal and the fœtal placentas, and their mucous coverings. After birth young mammals have an insufficient power of breathing, and in this they are like the reptilia. They are unable to absorb a sufficient quantity of oxygen to resist the influence of cold; and their power of retaining life when deprived of oxygen, is comparable to that of the reptilia.

This fact has been well established by the experiments of Buffon, Boyle, Ens, Roose, Haller, Fontana, Legallois, and more particularly W. F. Edwards. Nevertheless, these eminent experimenters have left many important questions without solution, some of which I will examine here.

In order to study the influence of temperature on the duration of life in asphyxiated animals, W. F. Edwards dipped into water, at different degrees of temperature, many animals of different ages. Unhappily he did not take notice of the temperature of the animals on which he experimented; and we will show that this circumstance is very important, because the degree of that temperature at the instant when asphyxia begins, has a considerable influence on the duration of life. Consequently, to discover with exactitude the influence of the tempera-

ture of a medium, on animals deprived of breathing, it was necessary to operate on animals at the same temperature. This has been done neither by Edwards nor by any other physiologist.

*A priori* it is easy to acknowledge that the duration of life in animals asphyxiated can be influenced by four capital circumstances: 1st. The degree of the temperature of the animals; 2d. The degree of the temperature of the medium; 3d. The age of the animals; 4th. Their species.

Consequently four series of experiments were to be performed. I have made them, and I propose to give here some of the results I have obtained. The remaining shall be detailed in a special paper.

I. *Influence of the Temperature of young warm-blooded animals on the length of their resistance to Asphyxia.*

*Experiment* 1. Nine rabbits of the same brood and aged about two days, were dipped into water at 25° Cent. (77° Fahr.) Two of these animals, No. 1 and No. 2, had the temperature which they generally have when they are in their nest covered by their mother. The others had been cooled by having been exposed to the action of an atmosphere at 10° Cent. (50° Fahr.) No. 3 and No. 4 had been exposed for a quarter of an hour; No. 5 and No. 6 for three quarters of an hour; and No. 7, No. 8 and No. 9 for an hour and a half. The results are represented in the following table:

TABLE I.*

| Nos. | Temperature of Animals. | Duration of Life. | Mean Duration of Life. |
|---|---|---|---|
| 1, | 35° to 36° Cent. (95 to 97° Fahr.) | 10′ | 12′ |
| 2, | ditto ditto | 14′ | |
| 3, | 29° to 30° Cent. (84° to 86° Fahr. | 16′ | 18′½ |
| 4, | ditto ditto | 21′ | |
| 5, | 23° to 24° Cent. (74° to 75° Fahr.) | 20′ | 23′ |
| 6, | ditto ditto | | |
| 7, | 18° to 19° Cent. (65° to 66° Fahr.) | 22′ | 28′ |
| 8, | ditto ditto | 29′ | |
| 9, | ditto ditto | 33′ | |

The one that lived shortest (10′,) was nearly at 36° Cent.

* The existence of reflex movements has been used in this experiment and in all the others as the proof of life.

(97° Fahr.;) the one that lived the longest (33′,) was nearly at 18° Cent. (65° Fahr.) The difference of temperature being 17° or 18° Cent. (about 32° Fahr.) the difference as to the duration of life was 23 minutes—that is, nearly two minutes for each diminution of three degrees Fahr.

The same experiment performed on many breeds of rabbits, has always given very nearly the same results.

These experiments prove that the temperature of young rabbits has a decided influence upon the duration of their life, when they are deprived of breathing. I have ascertained that the same thing takes place in cats, dogs, mice, and many species of birds.

*Experiment* 2. I dipped into water at the temperature of 25° Cent. (77° Fahr.) three bull-dogs.

TABLE II.

| Nos. | Temperature of Animals. | Duration of Life. |
|---|---|---|
| 1, | 38° Cent. (about 101° Fahr.) | 15′ |
| 2, | 30 " 86 " | 24′ |
| 3, | 22 " 77 " | 47′ |

Between No. 1 and No. 3 the difference of temperature was 16° Cent. (29° Fahr.;) the difference in the duration of life was thirty-two minutes—that is, two minutes for each diminution of one centigrade degree (nearly 2° Fahr.)

*Experiment* 3. I put a ligature around the trachea of four cur-dogs of the same brood, and aged three days.

TABLE III.

| Nos. | Temperature of Animals. | Duration of Life. |
|---|---|---|
| 1, | 37° Cent. (about 99° Fahr.) | 13′ |
| 2, | 28 " 83 " | 19′ |
| 3, | 24 " 76 " | 31′ |
| 4, | 19 " 67 " | 51′ |

So that between the two extremes the difference as the duration of life, was 38 for 18 Cent. (about 32° Fahr.)

Many other experiments on very young dogs gave very nearly the same results.

*Experiment* 4. On five cats, of the same brood, and aged two days, I put a ligature around the trachea, after having cooled three of them.

TABLE IV.

| Nos. | Temperature of the animals. | Duration of life. | Mean duration. |
|---|---|---|---|
| 1, | 36° Cents., (about 97° Fahr.) | 21′ | 25½′ |
| 2, | 36 " " 97 " | 30 | |
| 3, | 23 to 24 Cent., (74 to 76 Fahr.) | 47 | 48½ |
| 4, | 22 to 23 Cent., (72 to 75 Fahr.) | 50 | |
| 5, | 17 Cent., (about 63 Fahr.) | | 53 |

The temperature of the air air was then at 18½° Cents., (65 Fahr.)

*Experiment* 5. On four mice, probably aged from three to eight days, I put a ligature around the trachea after having cooled three of them.

TABLE V.

| Nos. | Temperature of the animals. | Duration of life. |
|---|---|---|
| 1, | 34° Cents., (about 94° Fahr.) | 11′ |
| 2, | 27 " " 81 " | 14 |
| 3, | 22 " " 72 " | 10 |
| 4, | 18 " " 65 " | 14 |

I have obtained analogous results in experimenting on birds.

*Experiment* 6. On seven magpies, aged from four to eight days, I put a ligature around the trachea, and opened widely the thoraco-abdominal cavity.

TABLE IV.

| Nos. | Temperature of the animals. | Duration of life. | Mean duration. |
|---|---|---|---|
| 1, | 36° Cent., (about 97° Fahr.) | 20′ | 24, |
| 2. | 36 " " 97 " | 28 | |
| 3, | 32 " " 97 " | 26 | 32½ |
| 4, | 31½ " " 90 " | 39 | |
| 5, | 26 " " 79 " | 12 | 50 |
| 6, | 26 " " 79 " | 58 | |
| 7, | 22 " " 72 " | | 72 |
| 8, | 20 " " 68 " | 65 | 76 |
| 9, | 20 " " 68 " | 87 | |
| 10, | 18 " " 65 " | 82 | 92 |
| 11, | 10 " " 65 " | 103 | |

*Experiment* 7. On other magpies I made the same experiment, but without opening the thoraco-abdominal cavity, so that asphyxia was much more complete.

TABLE VII.

| Nos. | Temperature of the animals. | Duration of life. |
|---|---|---|
| 1, | 35° Cent., (95° Fahr.) | 8′ |
| 2, | 30 " 86 " | 15 |
| 3, | 24 " 76 " | 27 |
| 4, | 19 " 67 " | 39 |

I have obtained nearly the same results from experiments upon many sparrow-hawks, ravens and jays.

All these facts show how considerable is the influence of the temperature of certain young animals and birds on the duration of their life when they are asphyxiated.

II. *Differences in the length of the resistance to asphyxia according to the species of animals.*

In order to discover what is the influence of the species, I made the following experiment. I tied the trachea on twenty-two animals belonging to eleven species, all of which were aged about four or five days. Their temperature had been cooled and they were all at about 26° Cent., (79° Fahr.) The temperature of the air was 19° Cent. (67° Fahr.)

TABLE VIII.

| Nos. | Species. | Duration of life. | Mean duration of life |
|---|---|---|---|
| 1, | Rabbit | 18′ | 21′ |
| 2, | do. | 24 | |
| 3, | Guinea pig | 6 | 7½ |
| 4, | do. | 9 | |
| 5, | Mouse | 20 | 23½ |
| 6, | do. | 27 | |
| 7, | Dog | 25 | 32 |
| 8, | do. | 39 | |
| 9, | Cat | 31 | 33½ |
| 10, | do. | 36 | |
| 11, | Sparrow | 8 | 10 |
| 12, | do. | 12 | |
| 13, | Pigeon | 5 | 7 |
| 14, | do. | 9 | |
| 15, | Jay | 13 | 15 |
| 16, | do. | 17 | |
| 17, | Raven | 14 | 18½ |
| 18, | do. | 23 | |
| 19, | Sparrow Hawks | 16 | 20 |
| 20, | do. | 24 | |
| 21, | Mag-pie | 18 | 22½ |
| 22, | do. | 25 | |

Now if we compare birds to mammals, we see that generally mammals resist asphyxia more than birds. The two following tables show the difference:

TABLE IX.

Mammals.

| | |
|---|---|
| Guinea-pigs | 7½′ |
| Rabbits | 21 |
| Mice | 23½ |
| Dogs | 32 |
| Cats | 33½ |
| Average | 23½ |

TABLE X.

Birds.

| | |
|---|---|
| Pigeons | 7′ |
| Sparrows | 10 |
| Jays | 15 |
| Raven | 18½ |
| Sparrow Hawks | 20 |
| Mag-pies | 21½ |
| Average | 15¼ |

III. *Influence of the temperature of adult warm-blooded animals on the duration of life when they are asphyxiated.*

I have discovered that the degree of the temperature of adult non-hybernating vertebrata has also a great influence on their power of resisting asphyxia. Dogs, cats, rabbits, guinea-pigs and birds, are subject to the same law when they are adult as when they are very young. The lower their temperature, the longer they live when they are asphyxiated. But although the existence of this law for adult vertebrata is beyond all doubt, it is sometimes very difficult to ascertain that existence. It is not easy to diminish the temperature of a non-hybernating adult mammal, or that of a bird, without exhausting the nervous and the muscular power of the animal, and also without producing a general and considerable perturbation. The action of a cold bath, for instance, so powerfully excites the vertebrata, that sometimes violent convulsions take place, and then death may occur in a short time, even before the animal has lost 10° cent. (18° Fahr.) of its temperature. However, some individuals may be cooled without being exhausted by convulsions. I have experimented on a great many which were in this condition. For more than eight years, without intending to make experiments on this subject, I have had the opportunity of stating, on more than a hundred adult rabbits or guinea-pigs, used for other researches, that, when their temperature is diminished, the duration of their life, when they are completely deprived of breathing, is decidedly longer than in the normal state. Whatever has been the cause of the cooling, the effect has been the same. In these numerous experiments, the animal heat has been diminished, either by a disease, by a poison, by an injury in the nervous

centres, by the immersion of the animal in melted ice, or by the application of a layer of oil, essence, or gelatine, to the whole skin of the animal.

The best mode of cooling a non-hybernating warm-blooded animal is to make the following experiment, in a room where the temperature of the air is not far from freezing point. I remove the superior part of the cranium of a mammal or of a bird, and afterwards cut the brain, slice by slice, from the anterior to the posterior extremity. After the ablation of the cerebrum and the cerebellum, the animal is put on the floor, where it is left perfectly quiet for an hour or two. If the experiment is made on a rabbit or a guinea-pig, the temperature of the animal then falls from 40° Cent. (104° Fahr.) to 30° or 35° Cent. (86 or 95° F.) A ligature being put around the trachea, I find that the animal is then able to live generally from six to 8 or 12 minutes.

The more the animal heat is diminished, the more, in general, is the resistance to asphyxia, except in cases where cooling has been produced too quickly.

On four adult rabbits, I put a ligature around the trachea, and have obtained the following results:

TABLE XI.

| Nos. | Temperature of the animals. | Duration of life. |
|---|---|---|
| 1, | 39½° Cents., (103° Fahr.) | 3½′ |
| 2, | 35 " 95 " | 6 |
| 3, | 30½ (between 86 and 87 Fahr.) | 10 |
| 4, | 25 Cents., (77 Fahr.) | 14 |

On three guinea-pigs I put a ligature around the trachea, and found the following facts:

TABLE XII.

| Nos. | Temperature of the animals. | Duration of life. |
|---|---|---|
| 1, | 40° Cents., (104° Fahr.) | 2¾′ |
| 2, | 35 " 95 " | 5½ |
| 3, | 30 " 86 " | 12 |

The longest persistence of life, after the cessation of breathing which I have found in adult non-hybernating animals, has been in a cat aged five months, and whose temperature had been diminished to 19° Cent. (about 67° Fahr.) in consequence of the laying bare of the abdominal viscera, and of the ablation of the cerebrum by small parts.

I will say only a few words about my experiments on adult birds.

Two pigeons were dipped into melting ice. In one of them, whose temperature had fallen from 42° Cent. (108° Fahr.) to 35° Cent. (95° Fahr.) life lasted six minutes after the ligature of the trachea. In the other, life lasted nine minutes; its temperature had fallen from 42° Cent. (108° Fahr.) to 30° Cent. (86° Fahr.)

I have obtained nearly the same results in experimenting on fowls and on ducks.

Physicians are generally astonished at seeing that men attacked with cholera are able to live almost without breathing. My experiments show that the principal, if not the only cause of the power living with so deficient a respiration, is the diminution of temperature. The same thing occurs in the last hour of life in many cases of diseases, and particularly those of the brain, of the respiratory organs, and in that dreadful disease of children called *scleroma*.

It is easy to understand how a considerable breathing becomes less and less necessary when the temperature of the animals under experiment is diminishing.

Whatever may be the function of oxygen, it is positive that most of the chemical changes which take place in the living animals are accompanied with a consumption of oxygen. If so, when these chemical changes are diminished, the consumption of oxygen ought to diminish. Now, as every diminution of the temperature of an animal produces a proportionate diminution in nearly all the acts of organic and animal life, and as these acts are all accompanied by chemical changes in which oxygen is consumed, it follows that, when they diminish, the consumption of oxygen also diminishes.

In the act of running, or in a rapid walk, we consume much more oxygen than in a state of rest. What we call rest is merely a state of diminished activity; and when the temperature of a mammal has been cooled down, the activity of most of the functions is much more diminished than in the most complete rest. It results from this fact, that when a warm blooded animal has lost a notable part of its ordinary warmth, its consumption of oxygen is much less than in a state of rest.

If the ligature of the trachea is made simultaneously on two adult mammals of the same species, one of them being at its normal temperature, and the other at a temperature of 5° Cent. (9° Fahr.) lower, we observe that this last one lives six, seven or eight minutes, and the other from one and a half to three minutes. If we suppose the quantity of oxygen existing in the lungs and in the blood of these two animals is precisely alike in both; and if we admit that death occurs in asphyxia, either from want of oxygen or by an action of carbonic acid, in both cases these two animals ought to live a different length of time, because the consumption of oxygen contained in blood and the production of carbonic acid are quicker in one of them than in the other. This explanation is so true, that when movements are excited in the cooled animal, after the beginning of asphyxia, it dies sooner than when it remains in rest.

From the facts and reasonings which are related in this note I draw the following conclusions:

1st. The temperature of newly-born warm-blooded animals has a great influence on the duration of their life when they are asphyxiated.

2d. There are very considerable differences in the duration of life in asphyxiated animals of different species, even when the experiment is performed in the same medium, and while their temperature is at the same degree.

3. The degree of the temperature of adult warm-blooded animals has also a great influence on the duration of their life when they are asphyxiated.

4th. The influence of the animation of the temperature of a warm-blooded animal on the duration of its life in asphyxia, explains the persistence of life in man, in cases of cholera, scleroma, and of some other diseases, when respiration is much diminished.

### XVIII.—ON THE CENTRAL SEAT OF GENERAL AND OF TACTILE SENSIBIBITY, AND ON THE VALUE OF CRIES AS MANIFESTATIONS OF PAIN.*

To determine where is the seat of perception and of volition is one of the greatest physiological questions. Flourens maintains

* See Comptes Rendus de l'Acad. des Sciences, 1849. t. xxix. p. 672.

that this seat is in the central lobes. Many physiologists, among whom are Bouillaud, Gerdy and Longet, have published papers against the doctrine of Flourens. Their only important argument is that mammals deprived of their whole encephalon, except the medulla oblongata and the pons varolii, continue to possess the faculty of perceiving sensations, and that the perception of pain is then manifested by cries and agitation. When the encephalon, says Longet,* is so much mutilated, in rabbits and dogs, that only the pons varolii and the medulla oblongata remain, in the cranial cavity, these animals, although they seem to be in a deep coma, are still able to agitate themselves, and to cry plaintively, under the influence of strong external irritations; but if a sufficiently deep alteration is made in the pons varolii there is an immediate cessation of the cries and of the agitation; it merely remains an animal in whom the circulation, the respiration and the other nutritive functions are momentarily accomplished.

On cats, rabbits and guinea-pigs, I have obtained a completely different result in performing that experiment. After I had removed, slice after slice, and from forwards backwards, the whole encephalon, except only the medulla oblongata, I have found that the mutilated animal, not only is much agitated, but cries plaintively when it is pinched. If the medulla oblongata is also removed, the cries cease, but the agitation still continues.

According to these experiments, it is evident that the pons varolii is not the only *seat of sensibility, the centre of perception of tactile impressions*, as Longet calls it, and that either the medulla oblongata is the seat of general sensibility or the cries do not prove that there is a perception.

Longet considers that the pons varolii is not only the centre of perception for sensation of pain, but also for tactile impressions. As to the tactile sensations he does not give the slightest appearance of proof. Certainly neither the cries nor the agitation are sufficient to authorize the opinion that the animal has felt a sensation of tact. If the existence of cries could prove that there is a perception of a tactile sensation, I should have to conclude from my experiments that the medulla oblongata is the seat of

* Traite de Physiol. Paris. 1850. t. ii, B. p. 38.

the faculty of perception of tactile sensations, for there are cries after the removal of the whole encephalon except the medulla oblongata, and there are no more after the removal of this last organ. If, instead of drawing conclusions from the existence of cries, we take notice only of the agitation, we are bound to conclude that the spinal cord is the seat of the faculty of perception of tactile sensations, for after this organ has been separated from the medulla oblongata, agitation takes place when a limb is pinched.*

Cries and agitation may be attributed to a property of the nervous centres, which is completely different from the faculty of perception of painful or tactile sensations. That property is the reflex faculty of the true spinal marrow;† it is the property of uniting, in co-ordinate movements isolated muscular contractions,‡ which is called by German physiologists the faculty of adaptation to an end. That property manifests itself by movements similar to those executed by unmutilated animals when they feel a pain; and it happens, sometimes, that these reflex movements are less disordered than the movements consecutive to a violent pain in an unmutilated animal. The *agitation* of the animals deprived of all the parts of their encephalon is merely the result of an action of the reflex faculty.

The cries also appear to exist only in consequence of a reflex action. This appears to be difficult to be proved, and it will seem nearly impossible to admit that cries may be produced by an animal that has felt no pain, or that has not had the will of crying. We may consider a cry as a noise produced in the larynx, as many times a quick expiration is performed when the vocal cords are stretched. Now as the tension of these cords and the expiration is produced by muscular contractions, it is easy to understand that these contractions are produced by a reflex action as well as the contractions of the muscles of the limbs.

For those who know that hiccup, coughing, sneezing, vomiting

* This conclusion is maintained as true by Sénac, Caldani, Kay, Legallois, Paton, J. W. Arnold and many others.

† As Dr. Marshall Hall calls it.

‡ That is the name given by Flourens more than 25 years ago.

and so forth, frequently are mere reflex phenomena, there ought to be no difficulty in admitting that crying is a pure reflex action.

If we here use the expressive language of Flourens, we will say, that the medulla oblongata has the faculty of uniting in a co-ordinate movement, the contractions of the expiratory muscles and that of the tensor muscles of the glottis.

From the facts and reasonings contained in this note I will now draw the following conclusions:

1st, That the experiment by which many physiologists have endeavored to prove that the cerebral lobes are not the exclusive seat of the perceptions, do not give such a proof.

2d, That animals can cry after the removal of the whole encephalon, except only the medulla oblongata.

3d, That the existence of cries cannot prove that there is a perception of pain, because cries result from muscular contractions which may be pure reflex actions.

4th, That there is no proof that the pons varolii is the centre of perceptions either of touch or of pain.

5th, That if it is admitted that cries prove that there is a perception of pain, we should have to admit that the medulla oblongata is also a centre for these perceptions.

(To be continued.)

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*Three Cases of Tape-Worm, with Remarks.* By HENRY S. PATTERSON, M. D., Professor of Materia Medica and Therapeutics in Pennsylvania Medical College.

CASE I. *Successful use of Kwosso.*—Miss W., æt. 22 years, consulted me in March, 1851, with tape-worm. She had been in failing health for several months, with headache, languor, variable appetite, nausea, and abdominal pains, but had not sought medical advice. Having taken a dose of citrate of magnesia, she observed in her discharges something peculiar, which proved to be joints of tænia solium. As I was at that time expecting some kwosso from Europe, I postponed treatment until it should arrive. Early in April it came, and was administered during my absence from the city by my friend Dr. Gilbert. He

gave the dose (ʒvj.) at once, the patient having fasted from the previous day. It excited some nausea but no vomiting. It was followed, in a few hours, by a dose of castor oil, which brought away a tape-worm several yards in length, but which unfortunately was not preserved for more minute examination. There can be no doubt, however, that the entire worm was expelled, as the patient rapidly convalesced, and has been in the enjoyment of uninterrupted health since that period.

Case II. *Failure of Kwosso. Successful use of Pumpkin-seeds.*—The subject of this case was for some time under my care, in consultation with my colleague, Dr. Darrach. I can aver that he was most thoroughly put through the entire routine of tape-worm remedies, before he left Philadelphia. He tells his own story so well, that I prefer to give the following extract from a letter announcing his restoration to health. "In the early part of January, 1836, I was rather suddenly attacked with what seemed to be an alarming diarrhœa, which continued for some weeks, resisting the usual remedies. My symptoms had been peculiar for some time previous to the attack. Indeed I had all the prominent symptoms of tænia as laid down in the books: viz., dizziness; occasional false vision; variable appetite; pain in the lumbar region; pain in the knee-joint; swelling of the abdomen; hesitancy of speech; restlessness in time of sleep; unusual drowsiness during the day; varying strength, being sometimes quite strong and then again quite feeble. Somewhere about the middle of February of the same year I discharged, at a morning stool, about nine yards of the tænia. From that time onward, for six years, I was more or less under medical treatment continuously. I took vast quantities of the spts. turpentine, (once or twice two ounces at the dose,) also the male-fern, calomel and jalap, and Jayne's vermifuge; and was several times under homœopathic treatment. I took also iodide of potassium, iodide of iron, decoction of pomegranate, and the 'kousso.' I discharged large quantities of the worm, but no head could be perceived. When the kousso failed, I began to despair of being cured at all, but my sister, Mrs. ———, sent me in December last two numbers of the Boston Medical and Surgical Journal, containing two several accounts of the cure of

tænia by the use of pumpkin-seeds. Having previously abstained from usual food for a day, on the 10th of January last I took, at 8 o'clock in the morning, two ounces of the kernels of pumpkin-seeds pulverized with two tablespoonfuls of white sugar, and commingled with a half pint of boiling water, making a very pleasant drink for a fasting man. I kept my bed, drinking frequently of cold water, and at 9½ o'clock I took an ounce of castor oil. At 10½ I drank a cup of hot black tea, and, in about two minutes, discharged about eight yards of the tape-worm, *with the head.* O, how I wept for joy that I was again a free man, after a servitude of six sad years to this awful complaint. Since then, I feel like a new being in a new world. My life had often been a weary burden, and yet I grew fleshy and looked healthful. For months in succession I had discharged the worm daily in pieces of six to eighteen inches, and also in gourd-seed form. I suppose that, without any over-estimate, I discharged during the six years of my affliction about *four hundred yards!* The remedy is very simple. Were I a practising physician I would never administer the turpentine for tape worm; I sometimes fear that I have experienced irretrievable harm to my kidneys from using it. There is virtue in pumpkin-seeds, doctor, even if it be a *Yankee notion.*"

Case III. *Successful use of Xanthoxylon fraxineum.*—For the following curious case I am indebted to my friend Dr. Thomas J. Turner, of Port Richmond. J. R. æt. 41 years, is a workman in a chemical laboratory. In Dec., 1847, whilst a private in the British army in Ireland, he first perceived that he was afflicted with tape-worm. He states that he passed fifteen to twenty joints at almost every stool for a time, and on several occasions as much as thirty feet at once. The surgeon of his regiment treated him with Ol. Terebinth. ℥j. every other day. He also took tin-powder, malefern root, and "every other article he ever heard of." He finally abandoned the hope of a radical cure. The symptom most prominent was a sense of gnawing and beating at the epigastrium in the morning. He was obliged to eat before rising, as he otherwise became faint and "had all sorts of queer feelings." His appetite was insatiable. While at Port Richmond in the autumn of last year, he was

attacked with tertian intermittent fever, for which he was recommended to take an infusion of prickly ash bark in brandy, a popular domestic remedy. He digested an ounce of the bark in a pint of brandy, and drank the whole during the apyrexia. The result was a most copious diaphoresis, as usual, and also some purgation, bringing away the entire worm. He has remained perfectly well since.

I have recorded the above cases, because of the intrinsic interest attached to each, and more especially because they serve to teach us moderation in our laudations of special remedies for tape-worm. There are many substances which, if given at the right time and in the right way, will destroy and expel the tænia solium, but there is not one of them which will not frequently disappoint the practitioner. The subject of each of the foregoing cases is vehement in praise of his or her "cure," and yet the judicious practitioner will give either of them in his next case with an abundant reservation of doubt as to the result. Similar accounts of the accidental cure of tape-worm are by no means rare. We have recently had in the medical journals a history (from the Ann. Univers. of Turin,) of a case in which a shepherd, to whom valerian had been prescribed for a nervous affection, plucked and took by mistake a quantity of Conium maculatum. He came very near losing his life, but fortunately recovered with the loss only of a tape-worm, which revealed the source of the nervous affection in question. The account is headed "Efficacy of Conium maculatum in Tape-worm." Is it not true, however, that any acro-narcotic poison, given so close to the verge of life-taking, may dislodge and destroy a parasite in the bowels? I should certainly refuse to admit the conium into the list of anthelmintics on this showing. The remedies used in our cases are fortunately without danger, and may be tried safely.

As to the kwosso, the excitement that attended its introduction appears to have subsided already, and it is to be presumed that the greater part of the 1400 pounds which the nephew of M. Rochet d'Hericourt admitted to Dr. Pereira that that gentleman had in store at Paris, still remains on hand. The first notice of this article I have met with is in the Annuaire of Bouchardat for 1841, on the authority of M. d'Abbadie, somewhat notorious in African affairs of late years. It was subsequently brought to

England by Dr. C. T. Beke, and was the subject of a paper read by Dr. Hodgkin at meeting of the British Association at York. (See London Medical Times, October 26th, 1844.) The Annuaire of Bouchardat for the same year contains a notice of an attempt at its chemical analysis by Stanislaus Martin. One of the most satisfactory accounts of it is found in a communication from M. Schimpfer, Governor of Adoa, in the Gazette Med. de Strasbourg, (Bouchard. Ann. 1849, p. 254.) He informs us that "it never completely expels the worm, or at least that rarely happens." He also states that it is but one of the remedies relied upon in tape-worm by the Abyssinians, and he enumerates eight others. Dr. Beke (to whom I am indebted for an interesting note on the subject,) informs me that the natives with whom he conversed did not rate the kwosso above several of their other remedies. An Abyssinian servant brought to London by Dr. B. was treated by Dr. Hodgkin for tape-worm, first with kwosso, and *afterwards* with Ol. Terebinth. The impression of Dr. B. was that the latter was the more efficacious, though neither finally removed the worm, and the man returned to Africa showing occasional symptoms of its presence. Dr. B. states that the natives who use the article are in the habit of taking a dose every two months. He is also my authority for the orthography kwosso, as best representing the Abyssinian pronunciation.

There can be very little doubt that the recent excitement about the kwosso was, in a great measure, the result of a commercial speculation. It has subsided suddenly, and I presume that the originators of the plan have been disappointed. It is already perceived that, while the kwosso is undoubtedly an active vermifuge, it is by no means so infallible as was represented. On the whole I consider it inferior to the Oleum Terebinthinæ, which is perfectly safe when judiciously given, notwithstanding the protest of my correspondent. I have given it constantly in ʒj. doses, or in doses of ʒss. with an equal quantity of Oleum Ricini, and have never seen any ill effect whatever. Should the kwosso be afforded at a reasonable price, it will probably take its place among our established means of cure, but I have no expectation of its being employed at the rate of $5 for the dose of six drachms.

## *Notes from my Case-Book.* By Wm. H. McKee, M. D., of Raleigh, North Carolina.

Messrs. Editors,—I offer the following cases from my note-book, and as occasion admits will present such others as I may think likely to be of interest, and repay the trouble of perusal.

### *Prolapsed Bladder Obstructing Labor.*

The subject of the present case was a colored woman, in labor with her third child, of robust and strong constitution. She was taken in labor on Wednesday night, at which time a colored midwife was sent for. She flattered the woman that the labor would soon be over, and all was right. She continued to linger, and suffered greatly, from her account, with cramp. The membranes gave way on Thursday afternoon, at which time she enjoyed a few hours of refreshing sleep. The pains continued, alternating occasionally with intermission of ease; finally, the midwife becoming alarmed, she desired that a physician should be sent for, and on Friday afternoon a very intelligent neighborhood physician, Dr. J. B. Owen, was called in. At the time of his arrival, he found the pains as he thought insufficient, and was about to administer a dose of ergot, but before doing so he made an examination, per vaginam, and found that there was an obstruction to the labor, which was unusual, and requested that I should be sent for. He then gave her an anodyne to procure rest. Accordingly, I was called in on Saturday; the distance was about fourteen miles, and I did not see the patient until one o'clock in the afternoon, she having been in labor some seventy hours. The following was her condition:—pulse 120 and feeble; countenance anxious, and wore a peculiar expression, an aspect of anxiety mixed with distress, and complained of pain in the hypogastric region, with a dragging sensation from the umbilicus, as if she would burst at each pain; skin bathed in a cold and profuse perspiration; tongue red and dry; thirst great; pains strong and forcing; external organs of generation swollen as thick as the wrist, hard, and at each pain blood exuded from the labiæ, they having become very sore, cracked, and dry from the repeated touching of the midwife. On examination, per vaginam, my finger came in contact with a large elastic tumor, filling up

the vagina, so I found it impossible to reach the presenting part of the fœtus. My first impression was, that it was the membranes, being assured that they had given way on Thursday. I inquired the last time she had micturated, and learned that it was about twenty-four hours. With these facts of the case, I pronounced it a case of prolapsed bladder. I first attempted to introduce the catheter, but failed, I am confident, for the want of a proper instrument, and from the frequent appeals of the patient for relief, I introduced a thumb lancet guided by the index finger into the vagina, and tapped the bladder, when immediately followed a large quantity of urine, to the great relief of the patient, and in fifteen minutes thereafter, she gave birth to a large dead male child. The after treatment, which was conducted by Dr. Owen, consisted in anodynes, with cooling drinks, cleanliness and an occasional aperient. She recovered in the usual time without having had a bad symptom, and resumed her ordinary business as a field hand.

*Remarks.*—This is the only case of prolapsed bladder which I have met with in a practice of twelve years. Ramsbotham, in his late work on obstetrics, mentions it as a cause of lingering labor, and condemns tapping the bladder in such cases; but it was impossible to have done otherwise in the present case, and the result proved it was judicious. I cannot conceive why the bladder should not be tapped when prolapsed in labor, as well as in cases of retention from stricture in the uretha, stone in the bladder, or enlarged prostrate in the male. It seems that the risk would be much less, but, I readily admit, that if the catheter can be used, it should by all means be preferred, and all operations to be avoided if possible.

### *Retention of the Placenta.*

In volume iv. page 177, of the New Orleans Medical Journal, will be found an article, by Dr. E. D. Fenner, upon this subject. Since reading that article, I have had two such cases to occur in my practice. The first was that of a lady with her ninth child. She had given birth to four living children, and had had four abortions. In the present case, she was about six months gone, and after unusual exertions and fatigue upon her part, in arranging her house for the summer, she was taken with pain in

the lumbar region, which was followed by a slight hemorrhage. Thinking but little about it, she continued to pursue her ordinary business for nearly a fortnight, during which time there was more or less hemorrhage, until her strength became very much enfeebled, and she took her bed. I was then consulted about the case, and gave as my opinion that the fœtus must be in a decaying state, and that the sooner she lost it the better. The pains and flooding both continued to increase; an anodyne of morphia, with a mustard plaster to the back, was directed. This procured a good night's rest, and on the next morning having a call to pass her urine, and while in the attempt to do so, she was seized with pain, and immediately passed a decayed fœtus into the night glass, separating itself at the same time from the placenta, the funis being in a sphacelated state. Being sent for immediately, I was in the house in half an hour after it happened; found her free from pain, no hemorrhage, but very uneasy about the after birth. On making an examination, per vaginam, I found the mouth of the womb nearly closed, so much so, that it was with difficulty that I could introduce my finger; to extract it I found was impossible. At her solicitation, I administered thirty grains of ergot, but previous to doing so, I told her and her husband that it was my conviction that it would do her no good, and might be of some injury; but she said that she had taken it before with advantage, and having such a horror of the after birth being retained, she was willing to submit to any means, within reason, to get rid of it. Accordingly the ergot was administered, and was followed by vomiting and great prostration. Brandy, warmth to the extremities, and sinapisms to the stomach were all used, yet no uterine pains followed. I then gave her a full anodyne, and explained to her the situation of the case, and related to her similar ones. By this means her fears became quieted, and she rested well during the day and all that night. On the next morning a dose of castor oil was administered, which operated well, but no placenta followed. A putrid and very offensive discharge from the vagina had now began, for which a diluted solution of chloride of soda was used by injection. This state of things continued for eleven days. During this time she had but very little hemorrhage or pain, and no fever. A dose of morphia, and an occasional dose of oil were administered. At

the expiration of this time, she discharged the placenta in a semi-putrid condition. From then she began to recover, and mended rapidly, and since has given birth to two living children.

The second case I did not see until the third day after her confinement. She was at that time suffering a good deal of pain, with more or less hemorrhage. On making an examination, per vaginam, I found that I could not succeed in introducing my hand or finger into the womb, she having become so very sore from the repeated manipulations of the midwife. A dose of laudanum was directed, and in the course of the day a dose of oil. The oil operated very well, and a goodly number of large clots accompanied the operation, and the patient and her attendants thought that she had wasted the placenta, and so informed me on my next visit; but on further inquiry, and another examination, I found that she was mistaken. The usual course, as was in the other case, was enjoined and pursued. After the seventh day, in the afternoon, having taken a dose of oil and spts. turpentine, the placenta came away without any pain, and she recovered in a short time, without ever having had fever or a bad symptom.

*Rupture of the Uterus.*

This case was a colored woman, who was in labor with her twelfth child. All of her previous labors, with the exception of the eleventh, were natural, and attended with no difficulty; but with the eleventh, she suffered very much, and came near dying. In the present labor a very intelligent mid-wife was called in. Labor continued active for three days, during which time she was bled and purged by oil. On the night of the third day the pains became very violent; she suffered from sick stomach, and, after a violent paroxysm of pain, she immediately expressed herself as though the child had moved, and that she was perfectly easy. The mid-wife having exhausted all her means, as she said, to bring on the labor again, and failing, she requested that a physician might be sent for. It was sixteen miles distant from town, and the pains having ceased on Sunday night, it was Monday afternoon before they made application for assistance. I was sent for, but could not go. It being a busy time with the physicians, they were unable to obtain the personal ser-

vices of a single one. On applying to Dr. I. J. Haywood, the oldest and most experienced physician in the city, and representing the situation of the case, the Doctor told them that he would send some ergot, but if it failed to produce pain, that they must let him know it. The ergot was administered, and without the desired effect. The messenger returned again that night, and reported the result. Dr. Haywood was unable to go to see the patient, as he had told them in the first instance, but feeling that natural desire to mitigate human suffering whenever in his power, sent for his brother, Dr. E. Bush Haywood, who had just graduated and returned home from Philadelphia, and requested that he would go and see her. Though late at night, dark, and a long distance over a bad road, the Doctor without hesitation obeyed the summons promptly.

On arriving at the place, Tuesday morning about day, he found the woman free from pain, but very much swollen. Upon examination, per vaginam, he was unable to reach the mouth of the womb, but after some exploration he did so, and was unable to discriminate what was the real situation or position of the fœtus. He gave her more ergot without producing any pain, and then gave as his opinion that nothing could be done that would save the woman's life; that she was in a sinking condition, and then left for the city, having remained until Tuesday afternoon. The Doctor, feeling a deep solicitude for the case, applied to me to accompany him to see the patient, as his brother's business was such that he could not spare the time. I did so with pleasure on Wednesday morning. Finding, on our arrival, that she had died the previous night, a request was made of her master to let us make a post-mortem examination. He consented, whereupon we proceeded to make it. The weather was very warm, and mortification having taken place, it was with great difficulty that we could accomplish our undertaking. The body was very much swollen, tympanitic, and, on introducing the scalpel into the abdomen, a stream of offensive gas issued, so putrid as to force us from the room for a short time. Having no chlorine, we oiled our hands, and by the burning of tar, we prosecuted and executed our task. On making an incision from the scrobiculus cordes down the linea alba to the pubis, and then a conical one across the middle of the abdomen, we

were enabled to present at once a full view of the whole situation. The child was found very much compressed, and in a state of decomposition, cross-wise its mother, out of the womb, with its face in the right iliac fossa, and its breach resting in the left; presenting its sternum to the vaginal orifice. The womb having been located in the abdominal side, from its fundus to its mouth, and found lying behind the fœtus, resting upon the sacrum. Owing to the gangrenous condition in which we found everything, we were compelled to suspend our observations. The result of the observation gave to the owner of the woman the satisfaction that all hopes for her relief were beyond the skill of any man at the time he sought assistance from the profession, and complimented my young friend, Dr. E. B. Haywood, for his prompt and discriminating judgment, besides thanking him for his kind attention.

*Empyema.*

This case I did not attend in its incipient stage, but was called in some two months afterwards. I found it to be a boy of twelve years of age, badly grown, and had been very much exposed to the winter's weather, as it was in the month of March that I first saw him. He was at that time suffering with acute pain in the right side, extending from the ninth rib up to the fourth: Fever, cough, no expectoration, and was unable to lie down, but had to set in a semi-recumbent position, inclining laterally to the right. Previous to my seeing him, he had been bled, blistered and salivated. His respiration was quick, pulse 120, thirsty, and at night delerious. Percussion flat on the whole of the anterior portion of right side, but on the posterior, resonant. Respiration inaudible anteriorly, but audible and somewhat tubular posteriorly. The left lung appeared to labor much more than was natural. . On inspecting the thorax, the right side was rather larger than the left; and on measuring, was some two inches larger, the anterior protruding under the nipple. This part of it appeared as if it was glazed, and rather pulpy or doughy to the touch, but gave no indication of fluctuation. Ordered an anodyne at night, poultice to the side, nourishment, flax-seed lemonade as a drink. With this treatment, and regulating the bowels by injections, the abscess pointed between the sixth and seventh ribs,

in about ten days. An incision was made at this point with a small trocar having the canula within, and a large quantity of thick pus was discharged. A continuation of the poultices; with quinine, and muriated tincture of iron, full diet and some porter, he recovered perfectly in the course of two months.

Case the second occurred in a negro man, aged 26, eight miles from the city. His master gave me the following history of his case. The negro had, as they supposed, an attack of pleurisy, for which he had been bled, puked, purged and blistered, and they thought then they must have cured him, but yet he continued to fall off. Though he ate very heartily, he complained of its giving him pain, and when he was first taken sick, three months previous, that he was as black a negro as is usually found, and now he was almost a mulatto. He suffered from rheumatism in early life, and then had a stiff knee from it. On inspecting the chest, I found nothing very remarkable as to the general appearance, but on percussing it, the left inferior portion was flat and painful anteriorly, but resonant in the upper two-thirds. By making pressure under the false ribs, in the hypochondriac region, it produced cough and gave him pain. I pronounced it an Empyema, and explained his situation to his master, but he thought that it could not be so, and intimated that he must be feigning his sickness, or, as the negro had it, that he was *tricked*, a very common impression among the negro population, and I am sorry to state, that it is one that is a good deal believed by some of the whites also. In about two weeks the negro began to break out in sores all over him. He had an inordinate appetite, but would refrain from eating as long as he could, because whenever he did eat, it gave him so much pain that he could only get ease by laying on his back, with his heels upwards against the house or fence, and made so much noise as to disturb the rest of the family. After the breaking out commenced, he had a difficulty in passing his urine, and his master was then convinced that he had a venereal disease, which the negro protested was not so: and he sent him off into an out house away from the rest of the family, as if some polluted plague had infested his plantation. He sent for me and communicated his convictions. I made an examination, and assured his master that he had no venereal disease, and that the breaking out was caused by the absorption of the matter

which was taken into the circulation, as well as the reason for his turning yellow. On examining his chest, I found an enlargement of the left side, but he was so emaciated, hectic, with night sweats, that I advised a palliative course, and stated that in a few days more they would not be disturbed by the negro, and requested that they would let me know when he died, so that I might make a post-mortem. Three days afterwards I was notified of his death. On arriving at the place, a large number of the neighbors had collected to witness the examination. The sternum was removed in the usual manner in making an examination of the chest, when a large quantity of putrid matter made its escape from the left side, so offensive that I could not continue my observations much further. The lung was compressed, and the pleura very much thickened.

Having satisfied myself and the owner, of the correctness of my opinion in the case, I proceeded no further with the examination. What is only remarkable in this case was the gradual fading of the dark color, and that he should have become yellow, as well as the breaking out with sores. The over distension from eating was evidently the cause of pain from that source.

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*Dr. S. P. Hullihen's New Method of Filling Teeth over exposed Nerves. Communicated by* E. B. GARDETTE, M. D.

Among the serious difficulties that have belonged to surgical operations for the preservation of the teeth, is that of successfully filling cavities formed by disease, after they have penetrated to the internal or natural cavity, and exposed the nerve.

Various expedients have been resorted to at different periods in the history and progress of the profession, to overcome this difficulty—such as, capping the nerve with a metallic plate, destroying it by means of the actual cautery, or by the application of caustics, and the entire extirpation of the nerve to the extremity of the fang. Each and all of these plans have had their trial and preference with more or less success in different hands, and oftener in very *indifferent* ones; but no candid and intelligent operator, I think, has regarded any of these modes of proceeding *unobjectionable*, whether viewed in reference to the results and advantages of the operation to the patient, or

the surgical principles involved, and which the true surgeon should never lose sight of in his efforts to overcome disease.

I therefore propose to describe briefly the operation of Dr. Hullihen, of Wheeling, Va., or, in other words, his mode of treating a tooth, where the decay has reached the nerve—a mode which has proved most singularly successful in his own able hands for a number of years past, and one that, having myself fully tested for more than a year, I now adopt in my own practice in all cases where the condition of a tooth renders it proper.

After the removal of the diseased parts from a tooth has been accomplished, making it apparent that the nerve is exposed, the operator will proceed to perforate the fang into its natural or nerve-cavity, through the gum and outer plate of the alveolar process; the perforation to commence about a line or a line and a half from the free edge of the gum, and to be in size that of a small knitting-needle. The opening should be made with a view of doing no other violence to the nerve than that of opening its blood-vessels, which may be at once known by the flow of arterial blood. The cavity in the tooth, formed by decay, may then be immediately filled, without the least fear of pain or ill consequences of any kind arising from the pressure of the plug upon the nerve.

The physiological change effected by this operation upon the nerve, may not as yet, perhaps, be satisfactorily explained. That the operation prevents subsequent pain and inflammation in the nerve, and therefore preserves the vitality and color of the tooth, under circumstances which no other known course of treatment can effect, all experience thus far proves perfectly conclusive; and upon this simple fact the merits of the operation are now urged, and laid before the medical profession.

This original mode of treating an exposed nerve, has, with the consent of Dr. Hullihen, been communicated to the "American Society of Dental Surgeons," at their recent annual meeting at Newport, R. I., by Dr. C. O. Cone, Dentist, of Baltimore; but never having myself been a member of that Society, I trust it is in no self-conceit of the comparative importance of my professional opinions that I now perform this agreeable act of personal friendship through a medical journal.

With the characteristic modesty of genius, Dr. Hullihen would, I well know, forbid any attempt to express my sense of the benefits he has conferred upon the profession and those who need its relief; and yet as one of those who appreciate the difficulties belonging to the class of operations under consideration, I must regard the discovery of Dr. Hullihen as among the most valuable improvements in dental surgery.

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## BIBLIOGRAPHICAL NOTICES.

*Lectures on the Principles and Practice of Surgery.* By BRANSBY B. COOPER, F. R. S., Senior Surgeon to Guy's Hospital, &c. Philadelphia: Blanchard & Lea, 1852. 8vo. pp. 771, including Index.

*The Principles and Practice of Surgery. Illustrated by three hundred and sixteen engravings on wood.* By WILLIAM PIRRIE, F. R. S. E., Regius Professor of Surgery in the Marischal College and University of Aberdeen, Surgeon to the Royal Infirmary, &c. &c. Edited with Additions by *John Neill*, M. D., Surgeon to the Pennsylvania Hospital, Demonstrator of Anatomy in the University of Pennsylvania, &c. Philadelphia: Blanchard & Lea, 1852. 8vo. pp. 784, including Index.

The first of the two works above presented has been some time awaiting notice on our table. At any other than the dog-day season, it would certainly have met with the immediate attention which the offspring of such high parentage demands. As it was, however, the labor of delving through seventy-five voluminous and desultory lectures, comprising nearly eight hundred pages of surgical wisdom and experience, was more than our energies were equal to until the recent arrival of a younger and less formidable applicant, in the second work announced, has roused us to the task.

Mr. Cooper's "Lectures" cannot be new to many of our

readers, since they were originally published in the London Lancet shortly after their delivery to the lecturer's hospital pupils, and thus circulated widely in this country. They require, therefore, a less particular examination at this time than we might otherwise feel bound to give them. Our author informs us that he has spared no pains in the preparation of his work, and that a considerable addition has been made to it in its present form. His object was "to furnish a useful compendium of surgery, in which the student may meet with a clear account of the practice of that science, established not only on my own experience, but likewise upon the best acknowledged authorities." He previously tells us that "it is not without mature consideration that I have determined upon publishing the present volume; but I have come to the conclusion that as its contents are of a practical character, embodying the experience of twenty-five years, during which I have occupied the position of surgeon to Guy's Hospital, it would be found useful not only to the student, but also to those who have entered upon the practice of their profession." Notwithstanding these claims, however, he wishes it to be "borne in mind that it has not been my intention to write a systematic work on the elements of the science of surgery."

Nevertheless, with every due allowance, and putting "the elements of the science" and "the abstract principles of the science," as he phrases it in another place, altogether out of the question, it must be said that his "practical book" makes but a very sorry figure as the result of a quarter of a century's opportunities as a surgeon and clinical teacher in the wards of Guy's Hospital, to say nothing of the many other invaluable advantages of the author as a military surgeon in at least one Peninsular campaign, and as the nephew and associate and successor in practice and teaching of Sir Astley Cooper. We do not pretend to say that there is not a great deal of interesting and instructive reading in these lectures—much that may be noted and acted on with profit by the practitioner and teacher, even more than by the student—much, too, that may not be found so strikingly or usefully exhibited in other works; still the apprehension with which recent experience has inclined us to regard these "practical books," is not lessened

by the advent of Mr. Bransby Cooper's publication. Supposing it to comprehend to a sufficient extent "the general principles of science upon which the practice is based," as he proposes, and admitting it to be the useful compendium of surgery intended, it is yet very far from being the clear and comprehensive account of the practice itself which we have a right to look for from such a source, or which the student ought alone to have. The rambling, diffuse and contradictory style of many portions of these lectures, and the strangely loose and inaccurate assertions frequently occurring in them, have become so well known and so generally commented on, that we feel less obliged to quote examples in this place. We may refer, however, to the lectures (6 and 7) on Hydrophobia and Tetanus. He says, "Of all the diseases to which the human system is liable, there seems to me none so appalling as that produced by the bite of a mad dog." Now, in the very next lecture he contradicts himself, and makes a most extravagant assertion, in the following language: "The disease which forms the subject of this chapter is as appalling as that which occupied our attention in the last lecture, and unfortunately as incurable(!)—I allude to Tetanus." Hydrophobia is stated in his previous lecture to be beyond "any rational hope of cure," (p. 80;) and although he professes to consider tetanus no less incurable, yet in the course of his lecture on the subject, he tells us that he had an opportunity of witnessing symptoms of tetanus resulting from the injection of a hydrocele, in which recovery took place under the use of large doses of calomel and opium, with turpentine enemata, (p. 84.) On the next page we read that "cases are recorded which have been successfully treated by the complete division of a wounded nerve, and by the removal of splinters of wood;" while a little further on, in remarking on a case which he reports in full, he says: "Notwithstanding the fatal result of this case, there seems just reason to consider that the tetanic symptoms were at once put a stop to by the removal of the source of irritation; it is clear that the patient fell a victim to phlebitis." Again, in lecture 46, on Amputations (p. 683,) he observes: "Baron Larrey, during the war in Egypt, amputated in several cases after symptoms of tetanus had commenced, and this practice was attended with sufficient success to

induce him to recommend it." Having thus established—meagerly, indeed, and very oddly, for a man of his authority—the fact which no well-informed surgeon would deliberately deny, the curability of tetanus, he, in the face of his own implied precept, concludes his chapter, as he began it, to the following effect: "Surgery, I fear, has done as little for the cure of this disease as physic, although there are recorded cases of persons having recovered when the amputation of limbs has been performed after tetanic symptoms had commenced, and where they had yielded upon the division of wounded nerves; but still, these operations have so frequently failed, that had a true statistical account been kept, I suspect but little more could be said for surgical than for medical treatment, when once the disease is developed in an acute form. So little light has as yet been thrown upon the true nature of the disease, that the medical practitioner is without the least guide to direct him in his practice. Tetanus, like hydrophobia, has hitherto defied the efforts of the physician," &c. &c.

A glance over the lecture on gun-shot wounds, which follows that on tetanus, affords us another sample of our author's style of teaching. The following will give some idea of his mode of jumping to a conclusion. "Any violent concentrated force may produce the same results as a gun-shot wound, and therefore all extreme contusions from machinery and railroad accidents offer precisely similar pathological considerations. Monographs on gun-shot wounds, or, indeed, on any subject, are therefore somewhat dangerous, as they lead pupils, more especially, to consider the subject as separated from the general principles of surgery." Now we will not stop to quarrel with his vague and sweeping mode of expressing the analogy between injuries arising from fire-arms and "all extreme contusions from machinery and rail-road accidents," but we must beg leave to demur entirely to the plea in condemnation of monographs, as "dangerous," because forsooth the thoughtless student may misunderstand their objects and the meaning of their titles.

This chapter on gun-shot wounds contains among other contradictions, one which, although unimportant in itself and doubtless an inadvertence, is so very marked as to have attracted general attention. Whether an accident or not, it is worth noting as a portion

of the evidence against the general accuracy of the book, and of its consequent unfitness for the student to whom it is especially addressed. A volume of lectures emanating from such an influential source and supposed to be revised with the greatest care, after having been first rehearsed in the lecture room and subsequently reported for the press and published in a medical periodical, must be expected to be especially reliable and free from errors, small as well as great, or to be held correspondingly accountable. We require from the veteran what we could not hope for from the beginner; and no one should complain if the short-comings of the former be visited with the utmost rigor of the law.

To return to our subject proper, on page 96 it is stated that "the wound made by the entrance of the ball is small, and its lips are inverted, discolored and valvular, while the opening through which the ball has made its escape is much larger, with an everted and ragged edge." This is the old-fashioned account, and a true enough one too in many cases. Now for the later story, which is here announced without the slightest allusion to the dictum previously given. "Many different statements have been made respecting the appearance and comparative size of the openings made at the entrance and exit of the bullet. It has been said that the hole by which it enters is smaller and cleaner than that by which it leaves the body, which is ragged and more gaping. This does not, however, seem to be correct; the opening by which the ball enters appears to be generally somewhat the larger of the two. But, in fact, there is so little difference between them that unless the direction of the shot were previously known, it would be impossible to say by which opening the ball entered, or by which it left the body."

It is to be presumed that those who swear by Mr. Bransby Cooper must split this "little difference" for themselves, until further orders—they might as well toss up for it like school boys, so far as his directions are concerned. And thus it is to a greater or less extent throughout the volume. The valuable matter, of which of course there is in various shapes a really large amount, might be compressed with advantage to the whole book into two-thirds if not one half of the present unmanageable bulk of the latter; while in spite of the author's second thought, adverse to "the assistance of wood-cuts," we think a few effective diagrams

and other illustrations properly distributed would have increased the usefulness quite as much as the attractiveness of a crowded and tedious mass of letter press that has nothing now to break in upon its monotony or lighten up its dulness. We do not consider ourselves bound to pursue this examination further, and will take leave of Mr. Cooper with a quotation of which no one need complain. We have taken it at random as an illustration of one of the good points in the book—the caution of the careful and experienced surgeon. Obviously wise and proper as the precept here presented is, it is yet too often shamefully neglected, not only in actual practice but in the books themselves.

"After what has been said as to the tendency to erysipelas following wounds of the scalp and skin of the face, let me urge the necessity of caution in undertaking even trivial operations on these regions of the body, without first having duly prepared the patient for the effects they invariably produce in the system. In some cases the surgeon may be requested to remove small encysted tumors from the scalp—an operation so trivial that it may be executed by a mere tyro in the profession; but even the most experienced and skilful surgeon may risk the life of a patient, and his own reputation, by want of a little precaution."

"Never, I say, should such a task be undertaken without the actual state of the patient's health being first well ascertained, as to the absence of any organic disease, the condition of the bowels, state of the urine, and natural performance of the functions essential to a healthy state of the body." After detailing three different cases in illustration of the importance of the principle, he goes on to say, "such cases as these show the necessity for doing everything which the science of surgery can command to place our patient in the greatest state of security, before we subject him to any surgical operation, and even then never to promise that any operation, however simple, will be perfectly free from danger; for depend upon it, it is as unwise to treat slightingly the most trifling incisions of the skin, as it is dishonest to attach to an operation more importance than it fully deserves."

Mr. Pirrie's work is one of much more moderate pretensions than Mr. Cooper's, and yet is, in our view, not only a vastly superior book of its kind, but one that is better altogether, and likely to be much more useful as well as more popular.

It is not offered as a "compendium of surgery," but simply as a compendium of its author's lectures, published in compliance with the long expressed wish of his pupils to be furnished with such a guide. It is not especially addressed to any class of readers, or placed in competition with any of its kind. And yet with a very little extension and other alteration it might be so admirably fitted for the purposes of a text-book, as to outstrip in popularity any competition that could be brought against it at the present time.

His endeavor in the preparation of his volume was "to combine simplicity of arrangement and conciseness and clearness of description with the elucidation of sound principles and practice." An examination of the different chapters will convince any one that, as far as he has gone, he has been remarkably successful in the execution of his task. We say, as far as he has gone; for unfortunately several important topics are not treated of at all, while perhaps as many more are hurried over or barely mentioned. Some of the articles, at the same time, are occupied with subjects which are evidently such favorites with the author as to have received an undue share of his attention at the expense of others. In this way some portions of his book have been so thoroughly worked up, and in themselves exhibit such excellent specimens of effective condensation, whilst they convey the very latest information in connection with their subjects, that we decidedly regret that our author's modesty has so limited his plan. It is only necessary for him to develope his discussion of many topics to a more proportionate length and fulness, and to introduce others which have not yet found a place, in order to make his book the very best of its kind in the English language.

The defects of Mr. Pirrie's volume affect rather its completeness and uniformity as a general work on Surgery than its value to the student as a most companionable guide book in his study of the topics to which the several chapters are devoted.

These chapters are twenty-five in number, each being distinct in itself, and occupied with some particular disease or injury, or class of diseases. They may be briefly enumerated with their titles in the following order: 1, Inflammation and its Results, a comparatively meager chapter, especially in its account of the treat-

ment and of the Results, and yet well brought up and furnished with the most recent views. 2, Erythema and Erysipelas, also a meagre chapter. 3, Wounds, rather more full, but still not as full as we think it ought to be—except in the section on gun-wounds, which is excellent. 4, Burns, in all respects a capital chapter. We would be glad, were there room here, to quote a portion of this article, by which we might afford some idea of the author's best style, both of matter and language. This chapter is extended to twenty-one pages, while that on wounds is compressed into thirty-one; and chapter fifth, on fractures, has but seventy-five. The last named chapter is deficient, not only in its discussion of certain fractures, but in its omission of others altogether. Dislocations come next in order, and take their place a little more at length than fractures. Succeeding them we have affections of the Osseous system, a capital chapter; Diseases of the Joints, also admirable; Curvatures of the Spine, an instructive and beautifully illustrated chapter; Talipes, also good; Affections of the Arteries and Brain, one of the very best chapters; Hernia, not inferior in any respect to the last; Wounds of the Abdomen; Calculous disorders, a full and attractive chapter; Affections of the Testicle, rather defective; Affections of the Genito-urinary Organs, still more incomplete; Amputations and Resections, very full in most respects, but no mention of the circular method of amputation; Deligation of Arteries, full and richly illustrated; Affections of the Rectum, rather incomplete; Affections of the Eye and its appendages, a very good summary; Affections of the Nose, not very full; Affections of the Mouth, Throat and Wind-pipe, not more satisfactory; Tumors, full, well arranged and well illustrated; and lastly, a rather brief chapter on Affections of the Breast. With this hasty comparative review of its contents, and with a solitary extract, we regret to be obliged to leave Mr. Pirrie's book. We would be very glad to be at liberty to discuss many matters of interest in different portions of the volume, and to dwell especially on several of the chapters which we are inclined to regard as models in their way. We must content ourselves, however, with the following quotation, which, although taken pretty much at random, will at least

serve to give some idea of our author's style and powers of lucid condensation:

"*Treatment* [*of Acute Abscess.*]—To remove general and local causes of excitement and irritation, and to promote the approach of the matter toward the surface, are important indications in the treatment of abscess. The best means of fulfilling these indications, are the strict observance of antiphlogistic regimen, perfect rest of the affected part, strict maintenance of a proper attitude, the removal of all sources of irritation, as well as of tension, or pressure, and the diligent use of warm emollient poultices, hot fomentations being applied each time the poultice is removed. Purulent matter having once been formed, it may be stated as a general rule in the treatment of acute abscess, that the grand indication then to be fulfilled is the early and free discharge of the matter. In some circumstances very early attention to this rule is of the utmost importance; as in abscesses under dense aponeuroses, and under thick fasciæ, (as, for example, under the temporal aponeurosis or under the tendon of the occipito-frontalis muscle, or under the fascia of the thigh, of the leg, of the arm, or of the fore-arm, or under the palmar or plantar fasciæ), within tendinous sheaths, as in paronychia tendinosa, or underneath the periosteum, as in paronychia periostei, or under the pericranium, in the proximity of bones, in the natural cavities, or in the texture of bones; also in abscesses arising from the extravasation of irritating fluids, as collections of matter caused by the extravasation of urine into the cellular tissue of the perineum and scrotum; abscesses in parts abounding with cellular tissue, when there is great risk of the spreading of the inflammation, or in situations where there is danger of making their way into some of the natural cavities, as into the chest or abdomen, or the joints; or such as are likely to occasion injury by pressing upon or impending the functions or important parts, as the trachea, the pharynx, the urethra; or abscesses, in highly vascular and sensitive parts, where the pain of an abscess is often most excruciating. With scarcely more than one exception, early and free opening of an abscess is the proper course; but in the above-mentioned conditions, it is peculiarly necessary to adopt this proceeding at the earliest possible period after we are certain of the actual existence of matter; for not only are time and suffering saved and tissue preserved by its adoption, but by its neglect the danger of most destructive local results is increased, and, in some circumstances, even the loss of life itself may result. Almost the only condition in which it is proper to delay opening, is in cases of glandular enlargement, in which, when other means have failed to produce absorption, and suppuration has occurred, the opening should be deferred, that the pressure of the matter may more effectually secure the disintegration and breaking up of the glandular structure, and thereby favor its removal.

"Of the various methods of opening abscesses I shall refer to only two; namely, by means of a bistoury, and by means of caustic. The former is preferable, except in two conditions, presently to be men-

tioned. It consists in making a *free, direct* opening in a depending situation, and as already stated, at an early period. In the event of the matter making its way in a different direction, a second opening should be made, which, from often being opposite to the first, is called a counter-opening. By making an early, large, direct opening in a depending situation, and keeping it open while matter continues to be secreted, the formation of sinuses, loss of substances, and disintegration are generally prevented, and the desired result is obtained more speedily, and with less suffering than it would be by any other proceeding.

"The two conditions in which opening by means of caustic is preferable, are the following:

"1. In small abscesses, partaking of a chronic character, where the integuments are attenuated in consequence of the opening having been delayed, or where they are in a diseased state. In such cases, the integuments are too much weakened to take on the necessary action for uniting with the subjacent parts; and as no healing process takes place until they are destroyed by ulceration, it is better to destroy them at once, and make a free opening by means of caustic. For this purpose the potassa fusa is preferred, and is applied so as to destroy the whole of the diseased and thinned integument.

"2. In cases of glandular enlargement in the state of abscess, in which condition the caustic should be used very freely, and be pressed into the gland in different situations, so as to lead to the action by which the diseased structure may be separated and removed." pp. 48, 49.

The additions of the American editor are to the purpose generally, and cannot fail to increase the value of the work, especially to readers in this country. The publishers have done their duty handsomely in the general getting up; and in regard to paper, typography and wood-cuts, have fallen little, if any, short of the original, whilst in the increased amount of text and illustrations, they have really gone beyond it. We cordially recommend their publication as already one of the best text-books on Surgery yet published in the country, and likely to become, in the new edition which must soon be called for, equal if not superior to any now extant.

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*Transactions of the Medical Society of the State of Pennsylvania at its annual session held in the city of Philadelphia, May* 1852. Published by the Society.

The Transactions of the Society for the present year form a very handsome volume of 146 pages, illustrated by three geo-

logical charts, all got up in the best style of printing and engraving. The minutes of the Society we have already given very fully in our pages. In addition, this volume contains the Address of the President, Dr. Innes, and various county and committee reports. The former is sensible and well-written, displaying a high ethical tone, and full of sound practical suggestions. Among other topics, Dr. Innes alludes to the seriously defective organization of the National Medical Association, and points out the evils arising from the admission of the representatives of "coteries formed on the *similia similibus* platform." We confidently trust that this grand defect will be speedily remedied, and we agree with Dr. Innes that it can be done effectually only by confining membership in the Association to "delegates exclusively from State and County Medical Societies."

The reports of the County Societies are of very great interest. Several contain a geological and topographical description of the respective counties; and the Schuylkill, Delaware and Lebanon reports are accompanied by geological charts. These, as the Schuylkill County committee suggest, are "not intended as mere temporary matters, but may be found useful for future reference." It will be remembered that the Berks County Society began this work last year, by submitting a geological chart, with remarks as to the prevalence of certain diseases (particularly dysentery,) upon certain formations more than upon others. The frequent references to this opinion in the reports of the present year, show that the professional mind is awakened to the topic, and an extent and industry of observation aroused which must lead to more reliable conclusions. In the report for 1851, the Berks County Society state that the fatal dysentery that prevailed in 1822 was almost exclusively confined to the slate formation, where it still "prevails from time to time, and occasionally proves exceedingly malignant;" and that this disease, "which is so frequently prevalent on all the other formations, never occurs epidemically on the limestone, and even sporadic cases are unfrequent." At the same time they assert that the general standard of health upon the limestone is inferior to that upon the other formations. In the reports for the present year, we have numerous references to this important

opinion, and facts cited both *pro* and *con*. The Delaware county report states that "after a careful examination and comparison of facts, the committee are impelled to the belief that the diseases of this county during the year have not been in any manner influenced by geological formation," except, of course, the prevalence of miasmatic disease upon the river alluvium. The Lebanon committee assert that "in the gravel district dysentery prevails more frequently than in other parts of the county, and often in the most malignant form." Dr. Henderson, reporting for Mifflin county, says that the opinion of the Berks county committee is not borne out by his experience, many cases of dysentery occurring "upon the lime rock and among those who use the hard water issuing from it." Dr. Confer, writing from Logan's Valley, Blair County, "principally limestone soil," mentions a violent epidemic dysentery prevailing there in August of last year. Dr. Ogier, of Chester County, describes an epidemic dysentery, commencing on the slate ridge to the south of the limestone valley, and for some time confined to that region, but afterwards extending over the limestone; and adds, that one-third of his patients resided in the valley and used limestone water alone as drink. Dr. Edge, of the same county, noticed that, although one half of his patients resided upon the limestone formation, only five used limestone water as drink, and there were other morbific causes in these cases. He adds that "on this subject there has always prevailed a sentiment in this place, which can be traced back to the experience of Drs. Todd, Kersey and Fairlamb, that the limestone water of our valley had a prophylactic effect against dysentery." Dr. Harry, of the same vicinity, states, as the result of twenty years' observation, that "congestive fever prevailed most in the limestone districts and in the valleys, whereas dysentery prevailed mostly on the hills, and he has never known it to prevail as an epidemic in the limestone district." The Bucks County committee state that the epidemic dysentery which afflicted their county in 1838, was "almost exclusively confined to an elevated sandy ridge," and they "have no recollection of any case originating in the limestone valley immediately adjacent." They admit, however, that this conflicts with the experience of their medical brethren of Montgomery County, in reference to a "dysentery which pre-

vailed in the limestone valley of Plymouth and Whitemarsh in the year 1849." The Berks County committee reiterate the opinion expressed in their last report. They give at length the report of Dr. Bertolet of Oley, upon the dysentery of his neighborhood in the summer of 1851. Dr. B. says that "the districts where dysentery was most common were either of the slate or gravel formations, or slate underlaid with limestone; some few sporadic cases were found in the limestone region, but these could almost invariably be traced to exposure on the gravel."

It will thus be seen that the facts cited are somewhat contradictory, while the weight of evidence seems to be in favor of the comparative immunity of limestone regions from this fatal disease, so prevalent of late years. Another interesting fact appears also—that the disease is generally confined to hot and dry seasons, when the streams are low and many springs and wells nearly dried up. The water from such sources will then contain, as the Lebanon committee suggest, an inordinate proportion of saline matter in solution, and may thus become irritating to the bowels. In some cases, it appears that families drinking water from deep wells, have invariably escaped, while those obtaining their water from open springs, especially with a northern exposure and inadequately shaded, have suffered severely. Another point, which we think has not yet attracted sufficient notice, is the distinction to be drawn between proper epidemic dysentery, such as has devastated whole regions of our State, and that which occasionally prevails in miasmatic districts simultaneously or alternately with fever. Dr. Parrish, of Chester County, describes in the present volume (p. 71,) a dysentery evidently of the latter character. We presume that Dr. Gaston means the same thing when he speaks of the dysentery of his neighborhood as obviously "of septic origin." The same *may* be true of the dysentery of Montgomery County, which, commencing in a peculiarly miasmatic region on the Schuylkill, extended up the limestone valley of Plymouth and Whitemarsh. It is desirable, in future reports, that we should have a statement not only of the topographical relation of the disease to geological structure, but also a notice of any local or particular

cause which might operate a deviation from the general law in the case.

The disease which, next to dysentery, appears to have occupied the attention of our country brethren during 1851, is Scarlatina, in regard to which we have several interesting observations and suggestions. The current of opinion in this, as in typhoid fever, sets strongly against any heroic or perturbating treatment. The subordidate importance of intermittent and remittent fevers in these reports, is striking. The case would have been very different twenty years ago. It is true that the counties bordering on the Susquehanna are scarcely represented at all; but we have reports covering the whole valley of the Schuylkill and most of its tributaries to the source. The Lebanon County committee state expressly that "the malarial fevers are rapidly disappearing as the improvements of the country advance."

On the whole, we consider this publication as highly honorable to the Society from which it emanates. We sincerely trust that its next meeting may be still more numerous, and that all the other counties in the State will be roused to action and co-operation.

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*Sketches of Brazil, including new views on Tropical and European Fever, with remarks on premature decay of the system, incident to Europeans on their return from hot climates.* By ROBERT DUNDAS, M. D., Physician to the Northern Hospital, Liverpool, &c. &c. 12mo. pp. 449. London: John Churchhill, 1852.

This volume is offered to the profession as the fruit of the observation and experience of a long medical career, passed in various tropical countries throughout the world. The author, Dr. Dundas, was attached to the British army in the Peninsula, West Indies, and coast of Africa, and was for twenty-three years medical superintendent of the British hospital at Bahia, in Brazil. His opportunities, therefore, on the important topic of which he treats, have been ample; and, while we must express our dissent from his opinions as to "the essential identity of fever in all countries," we most cordially bear testimony to

the interesting and able manner in which he has discussed the subject, as well as to the soundness of his views on the therapeutics of malarious fevers generally.

Dr. Dundas has adopted the lecture form of publication—his book professing to be "a series of lectures delivered at the Northern Hospital, (at Liverpool,) in the beginning of the present year." We have frequently expressed our distaste for the rambling and discursive style of writing for which this lecture form is usually an apology; and we must say that it appears particularly inappropriate in a controversial book like the one before us.

The two first lectures of the course are devoted to the causes and treatment of what the author terms the "break up" of health, so prevalent in Europeans, upon return from a protracted residence in tropical climates. Much of this he attributes to the comparative suspension of the function of the kidneys, which results from the temperature of hot climates; and, probably, with reason. Hepatic derangement, however, we are disposed to consider as the "fons et origo mali" here: the point, though, wants, in this country, the practical interest with which it is invested in Great Britain, owing to her numerous tropical colonial dependencies.

The gist of the book is an attempt to establish the unity of idiopathic fevers. The received distinction between periodical and continued fevers is rejected by Dr. Dundas, who maintains that the "law of periodicity or the disposition to remission and exacerbations, at certain intervals, will be *found to apply more or less distinctly to all human diseases*—to those arising in the most opposite conditions of the animal economy, and determined by morbific agents apparently the most dissimilar and opposite in their nature as well as in their results." From this starting point the author proceeds to detail and examine a variety of facts which came under his notice, in reference to the different forms of fever; whence he reaches the conviction,

"That fever is the expression of a type of disease essentially one and uniform, but admitting of an almost endless variety of forms; the simplest being displayed in the single paroxysm of an ague. It is furthermore obvious," he says, "on the most cursory observation, that the description of fever as a disease has, in the generality of instances, been drawn for certain localities, and not from the whole group of febrile diseases, as witnessed in different parts of the world. The

typhus fever of Great Britain is superseded by the bilious remittent and intermittent in Southern climates—by the plague in the Levant—and by the yellow fever within the tropics. Each of these maladies, under the special influence of climate, temperament, different modes of living, and numerous other agencies, affects certain peculiarities in its progress; but they are all distinctly impressed by the phenomena universally characteristic of fever as a genus of disease in every clime."

"Acting on the conviction of the essential identity of the remittent and intermittent fever of the tropics, with the typhus fever of Europe, and aware of the specific action of quinine in *every stage* of the former diseases, I have resorted," he says, "to its administration in the ordinary typhus of this country and Great Britain in all its stages, and commonly with the happiest results."

And, indeed, Dr. Dundas appeals to the efficacy of quinine in controlling the typhus fever of Great Britain,—*equal* (he thinks) to its specific influence over the fevers of tropical climates—as a strong argument in favor of his views.

"I would ask," he says, "whether, irrespective of all other evidence, the specific power exercised by proper doses of quinine, over all these several forms of fever, does not afford conclusive proof that, in their essential nature, these fevers are identical, and differ only in form and degree."

These opinions are not without partizans in our own country, and certainly may challenge a plausible array of facts in their support. For ourselves, however, we believe that the fevers known as typhus and typhoid, (into the distinction between which we shall not now enter,) and those of a periodical type—intermittent, remittent, congestive, and, we are disposed to add, yellow—are essentially distinct in origin and pathological characters, and should be also distinct in treatment. The few facts, which apparently militate against such a distinction, seem to us readily explicable by supposing the occasional simultaneous development of more than one form of fever. And against the doctrine of *identity*, there is so much to be urged on the score of difference of climate, season, &c., under which the different types of fever occur, (without dwelling upon their well-marked pathognomonic distinctions,) that we cannot for a moment hesitate in rejecting it. As regards Dr. Dundas' *practical* point of identity—the assumed equal

value of quinine in the treatment of typhus and periodical fevers—we should be content to try the question by it alone, "irrespective of all other evidence." In the United states, at least, we are satisfied that there will be a nearly unanimous denial of the *specific* efficacy of quinine, in controlling or cutting short typhus fevers. As a corroborant and supporter of the system, its great value in such fevers is of course admitted. But we cannot at all concede to it the same specific febrifuge influence over typhus as over intermittent, remittent, &c.

We have already adverted to Dr. Dundas' sound therapeutic views as to the *early* administration of large doses of quinine, in the treatment of periodical fevers. His book contains also interesting particulars on the medical topography of Bahia, including a notice of the incurable elephantiasis which prevails there.

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*A Treatise on the Practice of Medicine.* By GEORGE B. WOOD, M. D., Professor of the Theory and Practice of Medicine in the University of Pennsylvania, &c. &c. Third Edition, 2 vols. Philadelphia: Lippincott, Grambo & Co., 1852. 8vo. pp. 847 and 853, including index.

We regret that, owing to a derangement of editorial plans, a notice of this last edition of Dr. Wood's standard work has not appeared before, and our apologies for the delay are due to the author and our readers. In common with all who take an interest in American medical literature, we have felt the greatest satisfaction in the appearance of these rapidly succeeding editions of this excellent book—affording as they do, the gratifying evidence that it has taken the hold which it deserves upon the profession of our country, and is received as the national text-book upon the Practice of Medicine.

Previous notices of the earlier editions of this work, render superfluous any extended analysis of the edition just issued—"the treatise remaining unchanged in all its essential features." The modifications and alterations necessary to adapt it to the present state of medical knowledge, are, however, numerous. "Among the additions may be mentioned brief notices of several diseases, which, from their rarity or total absence in this coun-

try, or from being yet unknown as distinct affections, were not described in the former editions. Such are the relapsing fevers of Dr. Jenner, the leucocythemia of Professor Bennet, the dengue, and certain cutaneous affections, as trichosis, lupus, and pellagra." Modifications have been introduced on the subjects of inflammation, fatty degeneration, carcinoma, epidemic cholera, phthisis, hemorrhage, Bright's disease, &c. Extended reference has also been made to the important microscopic discoveries of recent times, and their bearing upon pathology.

Dr. Wood's views on the value of *cod-liver oil* in the treatment of phthisis have undergone great modifications since the publication of the last edition of his work. Upon so generally interesting a subject we believe that it will be acceptable to our readers that the opinion of such eminent authority should be quoted in extenso :—

"When the last edition of this work was published, the experience of the author had not been favorable to that remedy; but this was simply because he had not persevered with it a sufficient length of time, in the several cases in which it was employed. The oil seldom produces any very observable effect under a period of from three to six weeks; and, despairing of any good result, he had in every instance omitted it too soon. Subsequent experience has convinced him of its inestimable value. For the last three years he has used it in nearly every case of phthisis which has come under his notice either in private or hospital practice, and almost always, when it could be retained on the stomach, with either temporary or lasting benefit. His experience coincides generally with that of the writers who have testified favorably of its effects. In the worst cases, and most advanced stages, it usually improves the condition of the patient, renders him more comfortable, and postpones the fatal issue. Under less desperate circumstances, it often arrests for a time the march of the disease, giving hopes even of ultimate recovery; and, in some few instances, these hopes are justified by the result, so far as time has hitherto enabled us to judge. Given at the first appearance of the symptoms, I have frequently found it to set them aside altogether, and believe that, with the aid of other suitable remedies, it is capable of effecting permanent cures in very many instances. Its observable effects are usually to improve the digestion, to render the patient fatter and stronger, to diminish the frequency of the pulse and to check the sweats at night, to relieve the cough, and, in fine, greatly to ameliorate all the general symptoms. The patient often becomes fleshy, exchanges his paleness for a ruddy or healthy color, and feels himself nearly if not quite well. Unhappily, the physical signs do not generally undergo the same rapid improvement. If there was evidence of considerable solid deposition, this goes on to softening and the formation of a cavity; if

there was a cavity at the commencement of the treatment, this not unfrequently enlarges, while others form; and, after a period of very flattering amendment, perhaps for months, perhaps for a year or more, the symptoms return, and the patient too often sinks at last. Yet it is not always so. Sometimes suspicious physical signs in the early stage entirely disappear, and cavities either remain stationary or heal. The following, so far as I am capable of judging from my own observation, and the recorded experience of others, appears to be the real value of the remedy. It does not act as a specific, and is wholly incapable of producing, by any direct influence of its own, the removal of the deposited tuberculous matter. But it invigorates digestion, improves the character of the blood, and by a peculiar power modifies the nutritive process, so as to obviate, in a greater or less degree, the tendency to the deposition of tuberculous matter. When this tendency is not very strong, and other suitable measures are made to co-operate with the oil, it appears capable of arresting the further formation of tubercles altogether. But the matter deposited must pass through its own destined changes. If small in quantity, as in the earliest stage of the disease, it may undergo the calcareous metamorphosis, and thus cease to do harm. If larger, it must soften and be discharged, leaving a cavity, which may ultimately heal if not increased by further accessions of tubercle. If abundant, it must undergo the same change, and then must necessarily prove fatal, should so much of the lung be destroyed in the process as to render the remainder insufficient to fulfil the purposes of respiration, or should the strength be inadequate to support the exhausting effects of the necessary irritation and suppuration. It is seen, therefore, that cod-liver oil though a very valuable agent, perhaps the most valuable, should be looked on only as one of the means of confirming the general health, and thus affording the best possible protection against the further progress of the malady, and enabling the system to withstand the depressing and exhausting influences necessarily exerted upon it in the elimination of the tuberculous matter. These views are certainly encouraging; and they would seem to be supported by the fact of the recent diminution of the general mortality from phthisis, as evinced by the statistical reports, in the city of Philadelphia, which can be ascribed to no other known cause than the general use of cod-liver oil. But great care must be taken to guard against the error of relying upon this alone, to the neglect of exercise, exposure to pure air, and the various other methods of invigorating the system, already referred to. A tablespoonful of the oil should be given three times a-day, and the remedy persevered in for many months, nay, interruptedly, even for years, should it continue to agree with the patient, and the disease not appear to be sooner eradicated. As the diathesis is often constitutional and inherited, it will be necessary to be always on the watch, even after the disappearance of the symptoms, in order to meet them promptly should they return. As the oil favors the production of a rich blood, it is obvious that, upon the occurrence of hæmoptysis or acute inflammation, it should be suspended until these have been subdued, and then resumed."

*A Treatise on Diseases of the Air Passages: comprising an inquiry into the History, Pathology, Causes, and Treatment of those Affections of the Throat called Bronchitis, Chronic Laryngitis, Clergyman's Sore Throat, etc., etc.* By HORACE GREEN, A. M., M. D., Professor of the Theory and Practice of Medicine in the New York Medical College, &c. &c. Third edition, revised and enlarged. New York. Geo. P. Putnam. 1852.

A third edition of Dr. Green's work (which has met with much favor, both at home and abroad,) having been called for, the author has carefully revised the previous issues, and added to it two new chapters on spasmodic asthma and œdema of the glottis, in both of which his favorite remedy of topical cauterization has been successfully employed. We confess we are at a loss to understand the modus operandi of cauterization of the larynx in the treatment of spasmodic asthma, unless it be by the impression made upon the nervous system of the patient, and at any rate the number of cases reported (only three) is hardly sufficient to justify a conclusion as to its general applicability. It smacks rather too much of hobby-riding, coming from one whose name is so generally associated, in this country, with the method of treatment under notice.

Throughout the whole work we notice additional matter, derived from the author's more extended experience, and calculated to increase its value. The typographical execution and "getting up" of the work are highly creditable to the publishers, who have our thanks for the copy they have kindly sent us.

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*The Physician's Visiting List, Diary, and Book of Engagements, for* 1853. Philadelphia, Lindsay & Blakiston, 25 South Sixth Street.

Our prognostications in relation to this most acceptable offering to the profession, were speedily realized in the sale of the edition of 1852, and it has proved itself to be one of those conveniences which no man will ever be without, when once discovered.

We have received from the publishers a copy of the Visiting

List for 1853. Besides space for recording twenty-five visits per diem, it contains blanks for memoranda, obstetric engagements, residence of nurses, vaccination engagements, list of things lent to patients and others, accounts asked for, memoranda, a table of poisons and their antidotes, a table of doses, proceedings of the American Medical Association, and an excellently arranged almanac, and the whole is conveniently arranged so as to be readily carried in the pocket. From abundant experience we warmly commend it to our readers both in the town and in the country.

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# THE MEDICAL EXAMINER.

PHILADELPHIA, OCTOBER, 1852.

## FOREIGN QUACKERIES AND THE DRUG-INSPECTION LAW.

A recent case has raised the question of the admission of foreign quack medicines under the drug-inspection law, and the decision made by the authorities is not that which appears to us consonant with reason and justice. It is but natural that those whose proceedings it was intended to regulate by the operation of this law, should endeavor in every way to evade its provisions. Not only would they desire to escape the vigilance or overcome the integrity of the Examiner, but they would wish to obtain the implied sanction of his approval for their wares. An article which has passed the Custom House carries with it necessarily the endorsement of a competent Examiner, as one that may "properly, safely and without danger, be used for medicinal purposes." Such are the words of the law, and it is readily seen that such a sanction is worth more to a nostrum-dealer than a certificate from "the Duke of Aldborough," or a half dozen of the reverend gentlemen, who are, with us, the general sponsors of quackery.

The facts of the case are these. A quantity of certain substances labelled as Holloway's Pills and Ointment, was entered at the Custom House of this city, and referred to the drug-examiner for inspection. The duty of that officer, under the law, is to try all drugs by the

standard of the United States, London, Edinburgh, French and German Pharmacopœias, and to refuse to pass all that are adulterated or deteriorated, and "improper, unsafe, or dangerous to be used for medicinal purposes." In the present instance, articles were presented of a compound character, and of the composition of which the Examiner was necessarily ignorant. They were totally unknown to the medical profession. They might contain injurious or even poisonous constituents, not discernible by the most careful examination and analysis. At all events, they were secret nostrums and not drugs or medicines recognized by any codex whatever. Had they been unofficinal simples, vegetable or mineral, the source and character of which were known, or could be readily ascertained, there could be no difficulty about them. But they were vile quackeries and impostures, compounded by a designing person to defraud a gullible public. Could any honorable and conscientious examiner give them the sanction of his endorsement? We say No!—and personally, we would have resigned the office, if the case were ours, rather than affix our name and sanction to the invoice. The Examiner, did what we think was his duty in the premises, and refused to pass the articles, referring the case thereby to his official superiors.

But his judgment has been reversed. The quackeries in question have been admitted, and now are heralded with flaming advertisements in our newspapers. Worst of all, they have have been admitted mainly on the authority of an opinion to that effect, signed by five respectable gentlemen of our city, all of whom are in official positions (we believe) in our College of Pharmacy, and one of whom is a graduate and practitioner of medicine! We give this document that there may be no mistake about it. The signatures we omit. The Italics are ours.

"We, the undersigned, are of opinion that the law in reference to adulterated drugs, medicines, and medicinal preparations was not designed to exclude secret medicines of foreign manufacture, provided they were *made by the party, and at the place specified in the label*, and that, therefore, if the Inspector believe that *such preparations are what they purport to be and not spurious*, he is bound to pass them.

"At the same time we would have it expressly understood that our private opinions are decidedly adverse to all secret medicines, whether of foreign or domestic origin, and in giving the above opinion, we do it entirely in justice to our sense of the intended meaning of the law, and not from a desire to favor the introduction of such medicines."

Now there are, to our mind, several curious features in the above document. In the first place, we do not see that any body of apothe-

caries, however intelligent, are the proper judges of the intention and interpretation of any law. The language of the act of Congress is explicit enough, and may be understood by any one. If there were technical difficulties, they would be better referred to those accustomed to deal with legal enactments of doubtful interpretation. But the principal peculiarity is, that this opinion comes from gentlemen who have hitherto professed a firm hostility to quackery, and are members of an institution which the medical profession has always respected and valued as a public safeguard against its encroachments. Their proviso in the concluding paragraph is all very well, but it is not worth the paper it is written upon to combat the ill effects of its predecessor. It will be seen that the position taken not only authorizes the unlimited introduction of foreign nostrums, but it actually converts the drug-examiner into a guardian of the interests of the manufacturer of the abominations. It virtually makes him say to "Doctor" Holloway:— "You may flood our land with your vile compounds. You may poison our people and extract from them untold sums of gold in return; and no imitation or counterfeit shall interfere with your profits. I stand here, by appointment of the Government of the United States, to protect and keep inviolate the sanctity of your labels and package-marks, and to condemn and forfeit all 'pills and ointment' which do not bear upon them those sacred characters!" Such is the inevitable operation of the position taken, for which we have no doubt that the foreign empiric and his agents here will be duly grateful.

We can comprehend such a position as this: that the nostrums in question are not drugs or medicines within the intent and meaning of the law, and are therefore not subject to inspection by the Drug-Examiner at all. Such is the position which we believe the department must ultimately take, if its officers determine that these nostrums shall continue to come in. It is an insult to the self-respect of any honorable pharmaceutist or physician to ask him to become the endorser as "safe and proper" of every wretched empiricism that the lust of gain may induce any unprincipled European adventurer to send over here to gull the simple Yankees with. As to the course pursued by the Examiner, we unhesitatingly pronounce it honest, manly, and consistent. That his decision has been reversed is his misfortune, *and ours*. The sting of the business is, that it has been reversed by the action of men with whom we have hitherto been happy to co-operate in the advancement of legitimate medicine and pharmacy.

MINERAL SPRINGS.—NOTICE.—Doctor John Bell (Philadelphia,) who is preparing a work on *Mineral Springs*, more especially on those of the United States, is desirous of procuring, at an early day, all accessible information on the subject. With this view he requests his professional brethren to transmit to him all the facts in their possession which may throw light on the chemical composition and curative powers of the waters of the Springs in their respective neighborhoods.

Proprietors of these waters would oblige by sending to Dr. Bell authenticated accounts on these points, and also of the topography of the Springs, and the roads by which they are approached.

## MEDICAL NEWS.

PROGRESS of EPIDEMICS.—The cholera still claims its victims, and is making rapid advance towards our coasts. In Warsaw from fifty to sixty die daily; and on the 6th and 7th instant, it is said, 240 persons died.——At Posen, the mortality is very great, and in Dantzic, where it has also shown itself, four-fifths of those attacked perish in consequence.——Lamentable accounts have been received of the mortality among the inhabitants of the Trans-Vaal territory, Cape of Good Hope, arising from a contagious disease peculiar to the country, which has this season assumed an unusual degree of virulence. Upwards of 300 of the settlers have been cut off in one locality. The disease, it is said, is very rapid in its operation, generally ending in death within a few hours of the attack.——The small-pox continues to prevail in Jamaica; the yellow fever has much abated at Rio de Janeiro, and only a few cases now remain.——The official *Gazette* of Savoy states, that a deep incision in the trunk of the vine, near the root, cures the mangra, the disease which has been so destructive to vineyards this year.—— There is a very sad report that the disease, which has ruined the potato crop, has extended to the wheat; its extent at present is undecided. ——The drought has been very great all through the United States, and the crops have suffered severely in consequence. Latterly, however, there has been, as in this country, a succession of heavy thunder-storms, but the heat remains as intense as before. The public health throughout the country has suffered. All through the west and south a species of malignant cholera has prevailed extensively, while along the banks of the western rivers the Asiatic cholera, in a less mitigated form, has swept off multitudes of the inhabitants.—*Lond. Med. Times, Aug.* 21, 1852.

OBITUARY.—MR. HERBERT MAYO.—This well known author and surgeon died, a few days since, in Germany. Mr. Mayo was formerly lecturer on anatomy and physiology at King's College, and surgeon to the Middlesex Hospital. Of late years, however, he forsook the legitimate path of his profession, and became a mesmerist and a hydropath, on both which subjects he wrote extensively. His papers in the late *Medical Gazette* on the subject of mesmerism, exceeded all bounds, and many of his friends were fearful, at the time, that his mind had become wrecked. He subsequently embraced hydropathy, and retired to practise this heresy into Germany. Whilst in sound mind Mr. Mayo was undoubtedly an able writer and original thinker, and his lectures on Anatomy and Physiology were remarkable for clearness and beauty of style. His practical abilities as surgeon were great, but certainly physiology was his forte. His work on Physiology, although now superseded by more modern productions, will always be remembered with pleasure by those who read it. Mr. Mayo was somewhat conceited, but withal an amiable man. He was deficient, however, to a remarkable extent, in worldly wisdom; as an instance of which it may be mentioned, that whilst lecturing on Physiology, at King's College, he actually became a candidate for the professorship of the same science at University College, vacant by the resignation of Dr. Jones Quain; and then was astonished to find that the council of King's College did not approve of his conduct.—*London Lancet, Aug.* 28, 1852.

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# RECORD OF MEDICAL SCIENCE.

## OBSTETRICS.

*Chloroform in Infantile Convulsions and other Spasmodic Diseases.* By Professor SIMPSON, Edinburg.—As the majority of convulsive attacks in infants depend upon sympathetic or functional derangements, and not on structural changes, the first indication is to discover and remove sources of irritation; and the second, to reduce super-irritability of the excito-motory system. In the more chronic cases iron and zinc are used; in the more acute ones, antispasmodics; such as opium, hyoscyamus, and musk.

*Case.*—The Viscountess —— was confined on the 7th of October. On the 17th of the same month, the child was observed by the nurse to have two or three times during the day twitchings in the muscles of the face. On the two following days these increased in frequency and extent; on the 20th, the convulsions became far more violent in their

character, were more prolonged in their duration, and were repeated with much greater frequency. They continued with little change, and no abatement in their intensity or frequency, for the next fourteen days. Sometimes they affected the right side of the body much more severely than the left. In the meantime, Dr. Scott and I tried a great variety of means for their relief, but all in vain. The bowels were well acted upon with mercurials, magnesia, &c.; and every separate function attempted to be brought as near as possible to the standard of health. A new wet nurse was procured, lest the milk might perchance have been proving, as it sometimes does, the source of irritation. The child was placed in a larger and better ventilated room. Ice and iced water were occasionally applied to the scalp. At one time, when the fits became unusually prolonged, and were not only accompanied but followed for a time by much congestion in the vessels of the scalp and face, and an elevated state of the anterior fontanelle, two leeches were applied. Liniments of different kinds were used along the spine. Musk, with alkalies, was given perseveringly for several days as an antispasmodic; and small doses of opium, turpentine enemata, &c., were exhibited with the same view. All these, and other means, however, proved entirely futile.

As I have already stated, it was on the 20th of October that the fits first assumed a severe character, and they continued without any amelioration for about fourteen days from that period, recurring sometimes as frequently as ten or twelve times in an hour. At last the child, who had hitherto maintained wonderfully his strength and power of suction, began to show symptoms of debility and sinking; and during the fifteenth and sixteenth days of the attack, the fits became still more violent, and more distressing in their character. They were now accompanied with moans and screams that were very painful to listen to; symptoms of laryngismus and dyspnœa supervened towards the termination of each fit; and in the intervals the respiration, as well as the pulse, continued much quickened.

During these two last days of the disease, the exhaustion became so great, the dyspnœa in the intervals so distressing, and the fits so very violent and constant (seventeen were counted in one hour,) that Dr. Scott and I gave up all hopes of the possible survival of the infant. We had exhausted all the usual means of relief. Ultimately, but much more with the view of abating the screaming, laryngismus, and other distressing symptoms under which the little patient was suffering, than with any great hope of permanent relief and cure, I placed the child, on the forenoon of the 5th of November, for about an hour under the influence of the inhalation of chloroform. During this hour there was no recurrence of the fits; but in a short time after the withdrawal of the action of the anæsthetic the convulsions recommenced with their old violence and frequency. The benefit, however, was sufficient to encourage a longer repetition of the remedy; and from four to eight o'clock in the afternoon of the same day, my assistant, Mr. Drummond, placed and kept the child again under the influence of chloroform, a few inha-

lations from time to time, of a very small quantity of the drug sprinkled upon a handkerchief, and held before the face of the infant, being sufficient for this purpose. It was specially applied at any threatening of the recurrence of a fit, and during the four hours in question, all convulsions were in this way repressed. When the child was allowed to waken up at eight o'clock, it took the breast greedily, and continued well for upwards of an hour, when the convulsions again began to recur. At last, about 12 p. m., it was again placed under the inhalation of chloroform, and kept more or less perfectly under its action for upwards of twenty-four continuous hours, with the exception of being allowed to awaken eight or ten times during that period for the purpose of suction and nourishment. During most of this period it was carefully watched by Mr. Drummond, and at last the nurse was entrusted with the duty of adding the few drops of chloroform to the handkerchief, and exhibiting them at any time the child was offering to awaken or become restless.

After this long continuation of the chloroform, the child, on being allowed to waken up, as usual drank greedily at the nipple, and immediately fell back into a quiet and apparently natural sleep. The chloroform and all other formal medication was in consequence discontinued; and from this time there was subsequently no recurrence whatever of the convulsions. In about ten days the infant was removed with the family to the country. I have within the last two days (December 18,) seen the child as it was passing through Edinburg. It was strong, plump, and well grown for a child ten weeks, and was, in fact, revelling in the best of health.

In exhibiting the chloroform to this infant, ten ounces of the drug were expended; but of course a very large proportion of this quantity was lost by evaporation, in consequence of the mode in which it was employed.

I have known the inhalation of chloroform similarly useful in other cases in arresting infantile convulsions; but I am not acquainted with any instance in which the patient was so young as in the above instance. In the adult also, especially in cases of puerperal convulsions, I have now repeatedly seen the inhalation of chloroform as signal and satisfactory in its antispasmodic power over the convulsive fits, as it was in the little patient whose case I have described. Tetanus and epilepsy have been temporarily arrested and controlled by it; and perhaps it will yet be found one of our most certain and beneficial therapeutic means in the functional forms of those different convulsive or spasmodic diseases that are produced either by an undue excitability of the true spinal system, or by distant morbid irritations acting through this, the excito-motory system. Such reflex convulsive or spasmodic affections are, as is well known, particularly common in infancy and childhood. I have seen its use arrest laryngismus, colic, hiccup, &c.; and cases have been detailed to me of its occasional successful use in asthma, spasmodic urethral stricture, &c. But there is one common and too fatal spasmodic disease, almost confined to the period of childhood, in

which I have seen anæsthetic inhalations successful in arresting and controlling the paroxysms, and where probably a more extended and persevering use in the employment of them would be found to be attended with beneficial effects. I allude to hooping cough. I have known chloroform inhalations greatly abate the irritability of the cough attendant upon phthisis, &c. But with others I have scrupled to use chloroform inhalations in hooping-cough, under the fear that they might possibly increase the great predisposition which exists in this affection to pneumonic inflammation, or aggravate that inflammation if it were already present. This *a priori* reason, however, against the use of chloroform inhalations as an antispasmodic in hooping-cough has been of late set aside by the observations and experience of different German physicians. In a paper containing some remarks relative to the medical uses of chloroform, published in the *Monthly Journal* for December, 1847, in addition to its employment as an antispasmodic, anodyne, &c., I suggested the possibility of the drug acting as a contra-stimulant in some inflammatory diseases, and particularly those of a painful kind. Latterly we have had records published of its employment in upwards of 200 cases of pneumonia in German practice. Out of 193 cases of pneumonia treated with chloroform inhalations by Wachern, Baumgärtner, Helbing, and Schmidt, 9 patients died, or the mortality amounted to 4¼ per cent. Dr. Varrentrapp has given chloroform in 23 cases of pneumonia in the Frankfort Hospital. One of these 23 patients died. The detailed results in the other 22 cases seem to have been sufficiently satisfactory. At all events, the effects of the chloroform inhalations upon the cough, expectoration, &c., and upon the general course of the disease, would appear to show that we need have no fears of deleterious effects from it, as far as regarded the chance or existence of pulmonary inflammation; whatever advantages we may derive from it in relation to its prevention of that inflammatory state by allaying the cough, keeping the lungs in a relative state of quietude, and abating or restraining the succession of characteristic spasmodic attacks. I speak of course of the more severe cases of pertussis; for the milder forms of it require care merely rather than actual treatment. —*Braithwaite's Retrospect* and *Monthly Journal.*

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*Discussion in the Academy of Medicine of Paris, on Induction of Premature Labor.*—A very animated debate has just been concluded in the Academy of Medicine of Paris, regarding induction of Premature Labor, in cases of extreme narrowing of the pelvis and of uncontrollable vomiting. The principal speakers were M. Cazeaux, the reporter of a paper on the subject, and M. P. Dubois. These gentlemen, who both hold an eminent position as obstetricians, disagree thoroughly on the question. M. Dubois advocates induction of premature labor in cases of obstinate vomiting, and rejects it in narrowing of the pelvis; whilst M. Cazeaux holds exactly contrary opinions. The paper which gave rise to the discussion was sent in by M. Lenoir, who requested the learned body to give an opinion on the question. He had, in fact, per-

formed the operation upon a deformed woman, whose first child had been extracted in fragments, and he was anxious that the Academy should give its sanction to the proceeding, which sanction M. Dubois thought his colleagues should withhold.

We cannot enter into all the merits of the discussion, which was very animated and extremely instructive; we may, however, notice, that M. Dubois was proved to have himself advocated induction of premature labor in his lectures, and it was shown that his opinions must have since been materially modified. A feature of importance in the latter gentleman's speech is the relation of seven or eight cases of obstinate vomiting, which were mostly followed by death. In one of these cases induction of premature labor saved the patient and the child. M. Cazeaux showed very forcibly how preferable is induction of premature labor to the Cæsarian section or craniotomy; and the Academy, after a very protracted discussion, at last adopted the following conclusions, which are by far more reserved than those at first proposed by the reporter: "Whereas M. Lenoir was sufficiently warranted in having recourse to induction of premature labor in the case of Julie Gros, by the authority of two cases previously thus treated, and by the consenting voice of several of his professional brethren called in consultation, the Academy thanks the author for his interesting paper, and recommends the latter to the Committee entrusted with the publication of memoirs."—*London Lancet, Sept.* 2, 1852.

## PATHOLOGY AND PRACTICE OF MEDICINE.

*Case in which Prune Juice and Orange-Coloured Sputa were present without Pneumonia.* By J. Wyatt Crane, M. D., Edinburg, Licentiate of the Royal College of Physicians, &c.—No opinion in our profession has been so long and so universally received as, that the rustiness, or orange color of the sputa is, when present, pathognomonic of the existence of pneumonia. Valleix, one of the most guarded and accurate, as well as the most recent of systematic writers, says, p. 420, vol. 1, 2nd edit.:—"Ces crachats excepté ceux qui sont colorès en vert sont pathognomoniques de la pneumonie. Leur absence, il est vrai, ne prouve pas absolument que cette maladie n'existe pas, mais leur presence en constate l'existence.' I have, however, had a case under my care lately, where these colorations of the sputa have been present on several occasions, and in which, I am satisfied, both from the absence of the general and physical symptoms of pneumonia, and from the frequency of the occurrence of the disease, its march, and its duration, that pneumonia did not exist. I trust, therefore, that the case may be considered of sufficient interest to prove my apology for laying it before your readers; and, as I conceive that the cause of the coloration of the sputa must be sought for in a pre-existing state of disease, it will be necessary for me to detail somewhat more minutely than might otherwise be necessary, the state of the patient above a year previously to their occurrence, at which epoch I was consulted, in consequence of his finding that he could not walk a short distance without experiencing a

feeling of distension and oppression at the præcordia, which compelled him to stop suddenly; and, as these symptoms were likewise accompanied by a loss of muscular power in the lower extremities, rendering it impossible for him to proceed, he was obliged to lay hold of the nearest object to prevent himself from falling; he described himself as suffering from no palpitation, inconvenience, or difficulty of progression, until the moment when the seizure occurred, which it did when he had walked about fifty yards, and that in a few minutes, the oppression, &c., disappeared, until their sudden recurrence when he had walked about fifty yards further. His age was eighty-seven; notwithstanding, his bodily and mental powers were but little impaired, and were remarkably vigorous for his time of life; his appetite and digestion were good; he did not complain of palpitation of the heart, or pain anywhere, and when at rest, felt pretty well; the only complaint he made being a slight feeling of tightness at the epigastrium, of insufficient sleep, and occasional noises in the head, with a slight cough and spitting, principally in the morning; his general health had always been perfect. The pulse was 65, small, and intermittent, generally to the extent of about two intermissions in the minute; on percussion, I found the præcordial dulness a little extended, whilst, in all other parts of the chest, the sound was perfectly normal; on auscultation, an occasional mucous rattle was perceptible, the impulse of the heart was not increased, but a double bruit de soufflet, most clear in the region of the heart, and under the right clavicle, was perceptible in all parts of the chest. I inferred, from the above symptoms, the existence of an affection of the valves of the heart, as well as a slight chronic bronchitis, and contented myself with absolutely prohibiting all muscular exertion, or violent emotions; enjoining the patient to take no exercise except in his carriage, and regulating the diet and alvine functions. With these precautions, which he strictly observed, no increase of the symptoms complained of took place, and there was no development of fresh ones, till my attendance was again requested in the middle of the night of the 10th October, 1851, when I found him laboring under the greatest oppression, with a loud wheezing and rattle perceptible at a distance from the bed on which he was lying, but from which he was almost immediately obliged to rise, and sit upright on a chair, in consequence of a sense of impending suffocation. The respiration was exceedingly accelerated and laborious, there was considerable fever, and the pulse was 120. He complained of no pain, but constant cough and copious expectoration of a thin, glairy, and frothy fluid, which in the course of two hours from his first seizure amounted to about a breakfast-cup full; and at this epoch began to assume a rusty color, and to become thicker and more scanty. An attentive examination of the chest detected no other abnormal sounds than the usual bruit de soufflet, almost masked by mucous and sonorous rattles. He had gone to bed perfectly well, and in about two hours afterwards had experienced a difficulty of breathing and accelerated respiration, which he termed "a hurry;" this was succeeded by fever and rapidity of pulse, and this again in a short time by the wheezing and rattling in the chest—by the

cough and frequent expectoration before specified. The symptoms were now at their acme, and the dyspnœa was so urgent, that he repeatedly stated his conviction that, unless he were relieved immediately, he would be suffocated. I prescribed two grains of tart. antim., to be taken in divided doses till vomiting ensued; after which he became so much easier that I was enabled to leave him. On visiting him four hours afterwards, at 10 a. m., in conjunction with a French physician who had been requested to meet me, I found him, to my great surprise, suffering from little dyspnœa, no fever, pulse only 80, with scarcely any cough. The sputa which had been expectorated into another cup were scanty, thick, viscid, and deeply colored, "jus de pruneaux," contrasting most remarkably with the contents of their first cup in their quantity, consistency, and color. A minute examination of the chest detected no râle crepitant or dulness on percussion, and nothing abnormal, but a slight and occasional râle muqueux. Heart sounds as usual. The tartrate of antimony was ordered to be continued, and a blister applied. At our visit in the evening, the general symptoms were so much relieved, that but for the effects of the tartrate of antimony, he would have felt himself in his usual state of health. The sputa, however, were still deeply and universally colored "jus de pruneaux," and were very viscid. He passed a pretty good night, and the next day, 11th October, felt himself pretty well, pulse 76, skin cool, no dyspnœa, chest sounds as before, sputa still colored, but the quantity diminished. To continue the antimony, which, I should have stated, had not excited vomiting after the first morning. On the 12th there was no change to note, except a diminution in the pulse to 70; sputa as before. On the 13th, 14th, and 15th, the coloration of the sputa, which was the only morbid symptom remaining, gradually diminished, until they became of the character of the usual morning expectoration,—yellowish, white, and translucent; but still so viscid that, on turning the cup upside down, they remained attached to the bottom, and at this period his health was completely restored to its usual state.

On the 20th of November I was again sent for, and found him laboring under an attack of precisely similar character to the previous one, having commenced in the night, in the same manner, and with the same succession in the order of the symptoms, attended, for about two hours, by frequent expectoration of the same copious thin, glairy, frothy fluid, becoming colored, as before, just as it passed into the thicker viscid and deeply-tinged prune-juice sputa; at which period, the dyspnœa fever began to diminish, and continued rapidly to do so, till, in about six hours, the general symptoms had almost completely disappeared; and, in four days more, the sputa had again regained their natural appearance. The treatment was the same as before, except that no blister was applied. The chest sounds were as before; and no dulness, on percussion, or crepitous rattle, was preceptible at any time. Similar attacks occurred on the 5th December, 15th December, 29th December, 29th January, 13th February, 6th March, and 12th April; a few days after which the patient left Avranches to return to Ireland. They were of a similar

character to the preceding ones, except that the sputa were, in all of them, of an orange color, instead of the dark *jus de pruneaux*, which was only present in the two first; and each successive attack, also was milder than the preceding one, not only with reference to the general symptoms, but also with respect to the coloration of the thick sputa, which gradually became less intense and of shorter duration.

As I have, I fear, already trespassed too much upon your valuable space, I shall only further state, very shortly, that on reflecting upon the peculiarities of the case, I considered that the symptoms were explicable on the supposition that the impediment to the circulation through the lungs, owing to the affection of the valves of the heart, gradually produced distention and obstruction of the capillaries short of the degree which would terminate in pulmonary apoplexy, and that this congestion was relieved by transudation of the serum of the blood; thus accounting for the dyspnœa, etc., and for the first copious thin, frothy expectoration, as well as for the rapid melioration of the oppression and fever, in proportion as the expectoration proceeded; and that the subsequent coloration of the sputa was due to the more gradual mixture of the coloring particles of the blood with the mucus which was expectorated daily in the chronic bronchitis that had existed previouly —*London Medical Times, September* 4, 1852.

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*Microscopic Examination of a Relaxed Uvula.* By T. Inman, M.D., Lecturer on Materia Medica, Therapeutics, and Medical Jurisprudence, etc. A gentleman, whose father had suffered from a similar affection, was complaining of severe cough for some weeks, apparently arising from relaxation of the uvula.

On examining this appendage during an attempt at deglutition, the upper part was seen to contract firmly, leaving the lower part perfectly smooth and unchanged. It seemed thickened, but its color was normal. I recommended excision, which was at once submitted to, and I procured the fragment for examination. It was very firm, almost fibrous in the interior, and covered with the ordinary mucous membrane, which was not hypertrophied. On making sections of the fibrous part, and tearing them up with needles, the structure was found to consist of groups of large cells, 1-250th inch in diameter, and studded with an immense number of granules. These were probably portions of enlarged and altered mucous glands, and were bound together by strong areolar tissue. Amongst these were interspersed numerous muscular fibres, arranged in bundles. They were 1-750th inch in diameter, but had few of the ordinary characters of voluntary muscle. Very few were striated —all of them seemed to be composed of an outer membrane, and an inner substance closely resembling fibrin. It was homogeneous, yellow, divided irregularly into fragments by transverse divisions. All elasticity seemed to be gone. The majority of the fibres terminated in blunted points, as if they were undergoing absorption.

From this it will be seen that relaxation of the uvula is not (in every case at least) dependent upon muscular debility only, and therefore to be

cured by local stimuli, but that it is sometimes occasioned by an actual change of structure preventing contraction. The part so diseased acts as a constant dead weight, and increases the mischief by dragging down that portion which is still healthy. In this case no other remedy but excision could have been of any use. This simple corollary may be deduced from the microscopic appearances, viz., whenever the lower portion of the uvula is quite motionless during deglutition, it is useless to attempt to cure it, except by removal.—*London Medical Times of September* 4, 1852.

## MATERIA MEDICA AND THERAPEUTICS.

*Remarks on the Effects of Iodine on the Glandular System, and on the Properties of Kousso.* By THOMAS H. SILVESTER, M. D., Clapham.

[Read at the Anniversary Meeting of the South-Eastern Branch.]

### ON THE EFFECTS OF IODINE ON THE GLANDULAR SYSTEM.

In our journal the question has been asked,—Whether atrophy or absorption ever takes place in the glandular system from the use of iodine? In answer to this question, I would beg the favor of the present members of the Society to allow me to make a few remarks, the result of many years' attention to this point. From 1834 to 1844 a great many patients, suffering under secondary or tertiary syphilis, were admitted into St. Thomas' Hospital, more especially under the care of the late Dr. Williams, who had gained a high reputation in the treatment of these morbid symptoms. Most of these patients came under my notice and particular observation, and many of the remarkable cases were entered in my note-book, but not one instance of atrophy or absorption of the large glands, occurred in our experience. It was thought advisable, on the recommendation of Lugol, to test the efficacy of the iodide of potassium in scrofulous enlargement of the glands, and in order to give M. Lugol's method of treatment fair play, a most characteristic specimen of these affections was selected. A young woman, fat, florid, and fair, aged 18, was admitted with suppurating glands at the angle of the jaw, and others approaching suppuration, or hard and inflamed, extending to the chin, were conspicuously prominent. Eight grains of the iodide of potassium, in camphor mixture, were prescribed, and steadily administered, for nearly six months, without the slightest perceptible effect upon the scrofulous mass of glands, and she was presented in much the same state as at her admission. Now, it happened that in this girl the breasts were largely developed, but no change was produced in their size by the treatment adopted for the scrofulous ailment, notwithstanding the full dose, and prolonged administration of the iodide.

There were at this period, before the treatment had become generally known, innumerable cases of syphilitic periostitis, in which the iodide

of potassium was very successful, and yet we never witnessed atrophy or absorption of either the breast or testicle during the use of this remedy. A case of simple hypertrophy of the breasts was then made the subject of experiment; eight grains of the drug were taken, steadily and continuously, for three months, but no diminution of the mammæ took place.

A boy, aged 12, presented himself with immensely enlarged tonsils, and took the iodide nearly six months, without any impression having been made upon these organs. It would weary you to bring forward further illustration on this subject, and this negative kind of argument is, I am aware, not perfectly satisfactory, and may be destroyed by a single example of the positive power of the remedy in causing absorption of either the breast or testicle; but ten years' observation in a large hospital, failed to furnish me with a single proof in favor of the opinion that atrophy or absorption of the glandular system, in its normal condition, arises from the use of iodine in any form. Experience as to the topical application of this powerful agent, involves an inquiry into the effects of friction, stimulation, protection, and warmth, and excludes all inference as to its specific property. It must be confessed, that enlarged testicles not unfrequently yield to its influence, but it will be found, on inquiry, that in these cases the system has been contaminated by the syphilitic poison. The same remark is applicable to chronic induration of the inguinal glands. It is a very remarkable fact, that the swelling of the thyroid body, in common bronchocele, vanishes under the internal use of iodine, especially the iodide of potassium. The rapidity and certainty of its removal are equalled only by that of the venereal node; and I have sometimes thought that there may be a vital elective attraction between the iodine and the lime, which latter forms the basis of the nodal tumor, and is, probably, the chief element in the thyroid enlargement.

It still remains to be explained, how it happens that tumors, enlargement and thickenings of a nature other than have been noticed, disappear under the use, topical or internal, of the remedy in question: the explanation is undoubtedly difficult; but I may be allowed to remark, that there is an absence of permanency in the glands generally, the thyroid disappears spontaneously, the tonsils naturally at puberty, the breasts in advanced age, and sometimes the testicles and ovaries; and there are few practitioners who have not met with cases of absorption of the breasts and testicles from some unknown cause, and in morbid instances, when no medicine has been taken. I have over and over again known and seen large swellings vanish under the long-continued application of a poultice, or wet lint and oil silk; and an equal number of failures, where iodine, internally and externally, was had recourse to, have occurred to me.

I recommend this subject to my medical brethren, and I do not hesitate to say, that they will confer a great boon upon scientific medicine by determining, with certainty, the value and effect of iodine in the cure of disease.

ON THE PROPERTIES OF KOUSSO.

Much difference of opinion still exists with regard to the specific property of kousso, or the Brayera anthelmintica. It has been lauded by some as universally efficacious in the treatment of tape-worm, whilst by others it is described as inferior to either turpentine or the preparations of male fern. My attention has been drawn to this subject, more particularly of late, from learning that the price of the drug has undergone considerable diminution, and that we are likely to have a regular, abundant, and cheap supply from Abyssinia. My first patient gave *one guinea* for two doses of half an ounce each. The traveller, Mons. Rochet d'Hericourt, charged M. Simon, his agent in London, £1 15s. per ounce. He had in his possession 1400 pounds, which, at even £1 10s. per ounce, would have produced him the enormous sum of 22,400 guineas. The ordinary price of the bruised flowers and leaflets, of which I have brought a specimen for your inspection, is two shillings the ounce. It is prudent to order the drug in this form, rather than as a powder, adulteration in the former case being more difficult of accomplishment.

I have not hesitated to prescribe the kousso, at its present reduced cost, even to my dispensary patients, and the cases about to be related, encourage me to hope that much benefit will be conferred upon the poor by its employment, (for it is they, chiefly, who suffer from the disorder,) and that ultimately it will be a recognised article of the materia medica. I now beg to read a case or two by way of illustration.

*Case* 1.—A girl, aged 15, came under my care at the Clapham General Dispensary, for worms; she had been suffering from this cause nearly six years, and had undergone a variety of treatment, which had been partially efficacious in having brought away long portions of tænia; but the head could never be discovered in the evacuations. It often happened that, after taking a strong purgative, she passed fifteen or twenty feet of her internal enemy, and yet long pieces were evacuated every week or ten days. Her night dress frequently contained some of the articulations, and she was occasionally obliged to leave school for the purpose of having extruding portions removed.

Having taken large doses of the spirit of turpentine in gruel, many times, and five grains of the sulphate of iron, with a drachm of salts, three times a day for several months, without avail, she discontinued her visits to the dispensary, and placed herself under the care of my friend Mr. Angers, as a private patient. It was then determined to administer the kousso, and a dose was procured at considerable expense—namely, one guinea. It proved entirely efficacious; an immense mass of the worm came away, in which, after a most careful and minute examination, the head was discovered. This part might easily escape observation, owing to its minuteness; it appears singularly disproportionate to the size and length of the animal, not being much larger than a pin's head. It is characterised by four black points like eyes, but which are really suckers, by the aid of which this parasite worm absorbs the chyle contained in the intestinal canal. I preserved this part of the

animal for many months, in spirit of wine, but unfortunately my servant, by mistake, threw it away, to my very great annoyance. The first dose given to this patient answered the purpose, but it was thought advisable to repeat it, and accordingly another half ounce of the powder was infused in hot water, and taken the day after a gentle purge of castor oil. The whole of the worm seemed to have been removed, for the kousso acted gently, as before, upon the bowels, but no articulations were found; the patient remained free from further inconvenience. This patient had been under the most eminent worm doctors in the metropolis, without benefit.

*Case* 2.—Miss T., aged 12, had suffered for three years from tænia, and taken turpentine, senna, calomel, and the usual drastic doses. The first dose of the kousso fully answered the purpose, for, although the actual termination of the worm was not obtained, the mass was traced to a fine point, slightly jagged, and the patient has been free from the symptoms of the disorder a very long time. A second dose was given in this case also; it acted gently, as the first had done, but the motion contained nothing remarkable. The price had now been reduced to four shillings.

It would be easy to multiply evidence on this subject, from the experience of my professional friends, but the two cases now brought forward are sufficient to prove that the Brayera anthelmintica deserves a place in our materia medica, and a constant moderate price is the only circumstance wanting to bring it into general use. It will be observed that its success did not depend upon the activity of its purgative quality. The action was gentle, and far less severe than that of the inefficacious drastic remedies which had preceded it; we must therefore conclude that its operation is specific, and, like all specifics, it will occasionally fail. There are many varieties of the tænia, and it is not improbable that to some of these it does not prove poisonous, if its failure does not arise from adulteration. It seems to be a harmless thing, of no striking property in the human body when the worm is absent. I have given two drachms, infused in hot water, to persons complaining of abdominal pains, who formerly suffered from tænia, and it has moved the bowels slightly, and relieved the pains, just as an ordinary dose of rhubarb would do, and with no other perceptible effect. It is now pretty generally known that the Brayera anthelmintica was discovered by the traveller Bruce; it is classed amongst the Boraceæ; and by De Candolle, in tribe v., Dryadeæ. It grows in Abyssinia to the height of twenty feet, and is cultivated everywhere for its anthelmintic properties. It is found in Tigre, Agame, and Shoa, and, according to Dr. Beke, through the entire table land of North Eastern Abyssinia. The bunches are gathered before the seeds are quite ripe, whilst still a number of florets remain unchanged. Its peculiar property resides chiefly in its bitter acrid resin, soluble in ether and in alcohol. The decoction strikes a dark green tint with a solution of the sesquichloride of iron. Dr. Pereira, from whose paper in the *Pharmaceutical Journal*, (Vol. x., No. 1,) much information on the subject may be gained, gives the following directions for its administration:—"The powdered flowers are

to be mixed with luke-warm water, (for an adult, about ten ounces,) they are allowed to infuse for a quarter of an hour, a little lemon-juice is then to be swallowed, and the infusion being stirred up, the whole is taken, liquid and powder, at two or three draughts, at short intervals, being washed down by cold water and lemon-juice, To promote the operation, tea (without sugar or milk) may be taken. In three or four hours, if the remedy has not operated, a dose of castor oil, or a saline purgative should be administered."—p. 24.

Not unfrequently, both in public and private practice, patients present themselves suffering from tape-worm; sometimes very little inconvenience is complained of, but generally there are distinct symptoms of the disorder. I am inclined to think that the popular notion is well grounded, and that, till the head of the animal comes away, the patient is not cured. There is seldom more than one worm, and yet portions are constantly being separated, which, if they possessed independent vitality, and the power of reproduction, would assuredly fix themselves on some other portion of the intestinal tube.

The Abyssinians feed upon raw meat, and to this rude practice may be referred the prevalence of this malady amongst these people. The cysticercus is found in the flesh of the pig and sheep in our own country, and if the tænia be a developed cysticercus, its origin here would be accounted for. Some very humerous, and yet instructive remarks on this subject are contained in the last *Edinburgh Monthly Journal.* It is more than probable that the ova of the tænia, the ascaris, and some other parasitic animals, find their way into the human body through the unprepared or uncooked materials of our food. And it may be further remarked, that a low degree of vitality of the system greatly predisposes it to their attacks, and hence the value of steel, and other tonics, by way of prevention and restoration.—*Prov. Med. and Surg. Journ.*

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*Lead Poisoning.* Prof. FROST, of the Medical College of S. C., reports in the September number of the *Charleston Medical Journal,* several cases of *lead cholic* and other forms of *lead poisoning,* which, in his opinion, were clearly traceable to the use of water impregnated with some salt of lead, either taken from soda water reservoirs or from leaden pipes in other ways. As regards the asserted deleterious operation of acetate of lead in the ordinary medicinal doses (to which Dr. Jaynes, of Virginia, and others have lately called attention in the journals,) Dr. Frost avers that "he has never, in the course of his practice, known any injurious effects to arise from the use of this article."

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*On the Galbanum Plant.*—By F. A. BUHSE. The author states, that in his travels in Persia he discovered the plant which yields galbanum. In June, 1848, he found it on the declivities of the Demawend. It is a ferula, from the stalks of which a liquid issues abundantly, by the odour and nature of which he immediately recognized galbanum, and his guides assured him, moreover, that galbanum is gathered from

this plant. The author has not not yet distinctly determined the plant. It appears to differ from *Ferula erubescens* (*Annales des Sciences*, iii., Ser. 1844, p. 316.) only by the absence of commissural vitæ; but as neither Aucher-Eloy nor Kotschy, who have both collected the Ferula erubescens, make any mention of its yielding galbanum, the author is in doubt whether his plant be the same, or a variety of it. Don's genus Galbanum (Trib. Sibrinæ) and Lindley's Opaïdia (Trib. Smyrneæ) do not agree with the plant seen by Buhse, unless that both of these authors have made their descriptions from imperfect fruits, or that there exist other plants which yield galbanum. The plant which Buhse describes is called, in some parts of Persia, *Khasuch* (not *Kasneh*, which means Cichor intybus, nor Gäshnis, which is Coriand. sativum,) and appears to be confined to certain districts of Persia. In the whole large district of the Elburs-chain, from the south-east angle to the south-west angle of the Caspian Sea, it is only found in the neighbourhood of the Demawend; but here at an elevation of from 4000 to 8000 feet, and even on the declivity of the top of the Demawend. It exists neither on the mountains of Talysch, nor in the districts of Karadah and Tabris. It is said to re-appear on the Mount Alwend, near Hamadan, and in the neighbourhood of the great salt-desert. Near Hamadan, Aucher-Eloy has gathered his Ferula erubescens, and this supports the supposition that the author's plant is the same. In the salt-desert itself Buhse did not meet with it again. The inhabitants of the Demawend collect the gum-resin, which issues spontaneously from the lower part of the stalk; they do not make incisions in the plant; but it is not at this place that the galbanum is collected for commercial purposes. When fresh, the gum-resin is white like milk, liquid, and somewhat glutinous. In the air it soon becomes yellow, elastic, and finally solid. The odour is rather strong, unpleasant, and similar to that of our commercial galbanum.—*Central Blatt*, für 1852, No. xiii, *from Lond. Pharm. Jour. June*, 1852.

## CHEMISTRY.

*Lucifer Match Making and Amorphous Phosphorus.*—The announcement of Professor Shrotter's discovery of the mode of preparing amorphous phosphorus, derived much of its practical interest from the supposition that the phosphorus in this state would be less dangerous and injurious to the persons engaged in the manufacture of lucifer matches. A medal was awarded to Mr. Albright for the introduction of the prepared phosphorus as an article of commerce, and it may now be obtained at a moderate price of Messrs. Sturge, of Birmingham. The dreadful disease to which the makers of lucifer matches are liable, from inhaling the fumes of ordinary phosphorus, having been described and brought under public notice, it might have been supposed that no time would have been lost in ascertaining the value of the above discovery as a means of alleviating so much human suffering. Matches prepared with the amorphous phosphorus were shown in the Great Exhibition, and it was stated at the time that in the manufacture of these

matches, the evils arising from the inhalation of deleterious fumes were obviated, while the result of the experiment was satisfactory.

It is, however, difficult to introduce any innovation of this kind into an extensive branch of manufacture. A series of experiments must be made to test the efficacy of the new preparations, the most advantageous mode of employing it, the quality of the goods, and the economy of the process. In the mean time the several departments of the manufactory are progressing like clock-work. All hands are busily employed, the proprietor is fully occupied with superintending the operations and the accounts, and a large box of amorphous phosphorus remains in the office unpacked, waiting for a convenient opportunity to complete the experiments.

Such was the state of affairs at Mr. Dixon's manufactory at Newton Heath, near Manchester, on the occasion of a recent inspection. Outside the building large piles of timber were stored up ready for use. A machine worked by a steam-engine was reducing blocks into the form of matches. A block previously cut the length of the match, and pressed against the side of the machine, disappeared in a few seconds. The sticks being removed into the next room were tied into bundles about eight inches in diameter, ready for dipping in sulphur. This was done in another room in an iron vessel over a furnace. Immediately after the dipping, the workman gives each bundle a slight pressure with a rotatory movement, to separate the matches from each other at the moment of solidification, otherwise the sulphur would cohere into a solid mass. The matches are next transferred into a room where they are arranged, so as not to be in contact with each other, in frames about two feet by one foot, ready for the phosphorus dipping. The composition used for this purpose consists of chlorate of potash, phosphorus, and glue, and it is spread in a thin layer on a stone or marble slab, heated below by steam or hot water. The operator holds the frame lengthways, and dips the ends of the matches in the composition, taking care that all of them are coated. Sometimes the sticks are in the first instance cut twice the required length, dipped at both ends, and afterwards bisected. In the process of cutting they occasionally ignite, occasioning loss and also vitiating the atmosphere. When the dipping is completed, they are taken to the sorting room and packed in boxes. In another room the boxes are labelled and sent to the packing room. The boxes are made on the premises, the shavings cut, and the tops and bottoms stamped by machinery, cut to the proper size, glued, and fitted, which operations are performed in separate apartments. Each box of lucifer matches, price retail one halfpenny, passes through the hands of seventeen persons, chiefly children. The Factory Act is not applicable to these establishments, and the children, averaging from seven to twelve years of age, work twelve and sometimes thirteen hours in the day. They earn (by piece work) from 3*s.* to 5*s.* a week, and the adults from 9*s.* to 12*s.*

The cases of disease occur chiefly in the phosphorus dipping room, sometimes in the room where the matches are sorted and packed in boxes, but seldom in other parts of the establishment. The nature of the

disease is described in the *Dublin Quarterly Journal of Medical Science*, for August, page 10, by Mr. Harrison:

"An affection ensues which is so insidious in its nature that it is at first supposed to be common toothache, and a most serious disease of the jaw is produced before the patient is fairly aware of his condition. The disease gradually creeps on until the sufferer becomes a miserable and loathsome object, spending the best period of his life in the wards of a public hospital. * * * * Many patients have died of the disease; many, unable to open their jaws, have lingered with carious and necrosed bones; others have suffered dreadful mutilations from surgical operations, considering themselves happy to escape with the loss of the greater portion of the lower jaw."

Mr. Harrison's paper contains much interesting information, with the medical reports of several cases.

It would be foreign to our purpose to enlarge upon this view of the subject; but the disease being of chemical origin, the *modus operandi* of the poison may involve a chemical enquiry. Does the phosphorus when inhaled destroy the vitality of the bone by chemical action on its substance? or does it operate merely as an irritant on the tissues, causing inflammatory action? The bone in its diseased state has a spongy cellular appearance, with excrescences of a similar character adhering to it. The teeth generally continue sound and white, while the jaw which contains them is altered in texture, dead, and discolored. We believe the diseased bone has not been chemically examined. Whether such examination would throw any light upon the subject is a speculative question; but we think it not unworthy of consideration.

There are at this time in the manufactory several persons who have suffered severely from the disease, and who on recovery immediately returned to their work—not however to the dipping department. In the Museum of the Manchester Infirmary is the lower jaw of a young woman who is now at work. Her face is much disfigured by the loss of her chin, and in looking into her mouth the root of the tongue is seen connected with her under lip, the space formerly occupied by the jaw being obliterated by the contraction of the check. A young man who has lost his jaw is also in the factory. They are not isolated cases.

It is stated in the factory that the workpeople have sometimes applied the phosphorus paste to decayed teeth, under the idea that it was a cure for the toothache, and to this imprudence some of the early cases of the disease are attributed. The frightful nature of the disorder is now sufficiently understood to serve as an incentive to greater precautions. Increased attention has been paid to ventilation and cleanliness, and the practice of taking meals on the premises is not allowed. It appears, however, from the statements of some of the workpeople who are engaged in the phosphorus dipping room, that their clothes become incandescent in the dark, and although the cases of the disease are less frequent than they have been formerly, a security against its recurrence is not attained. The proprietor of one factory states that he has had no cases in his establishment on account of a more careful method of dipping the matches, by which the face of the operator is further removed from the source

of danger; but we are informed that some patients, from that factory have applied for medical relief in the neighborbood. Mr. Standring informs us that there is now in the Manchester workhouse a young woman suffering from a "phosphoric jaw." She worked three years in a match manufactory; she then went to a silk mill, where she had been about a year and a half before the disease first made its appearance. Eleven months since she was admitted into the infirmary and remained there eighteen weeks, since which time she has been an inmate of the workhouse. The disease at present affects only one side of the jaw—a portion of which is likely soon to be detached.

Various means of prevention have been tried, and others suggested. In a manufactory in Dublin, camphor is added to the composition, which masks the smell, and is said to act as a prophylactic. This latter opinion requires further proof. Mr. Taylor, of Nottingham, suggests the use of a mask with a tube communicating with the outside of the building. Mr. Stanley, of St. Bartholomew's Hospital, recommends the exposure of oil of turpentine in saucers about the workrooms, as a solvent of the fumes of phosphorus. Dr. Baur recommends the use of a sponge or handkerchief moistened with a solution of soda or potash and applied to the mouth. The proprietor of the factory above referred to states that he has diminished the quantity of phosphorus to less than a third of that which he formerly used, and that by this and other precautions the prevalence of the disease has been greatly diminished. He has tried the amorphous phosphorus on a small scale, by way of experiment, and says that it is more expensive than the ordinary kind, as a larger quantity is required. But the chief objection appears to be that the composition now in use answers quite well. The matches never fail; the mode of preparing the composition is understood; the result is known, and the demand for the matches unceasing. The amorphous phosphorus requires further trial; the makers are not yet accustomed to it. If it should fail their trade would be injured; the experiment would interfere with the habits of the factory; therefore the operations are continued in the usual way, the box of Sturge's phosphorus remains unopened in the office, and the value of the discovery is not fairly put to the test.—*London Pharmaceutical Journal, September*, 1852.

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*Preparation of pure fatty acids for the manufacture of candles by the distillation of common fats.*—At the last Conversazione, held at the house of the Pharmaceutical Society, a series of specimens were exhibited illustrating the process adopted at the works of Price's Patent Candle Company for obtaining a white and hard fatty substance, suitable for the manufacture of the best description of candles by distillation from palm oil and other cheap fats. The following description of the details of the process is given in the "Reports of the Juries" of the Great Exhibition.

*Sulphuric Saponification.*—About twenty tons of fat, say palm oil, are placed in a large lead-lined vat, and fused by a steam jet. The fluid mass, after being allowed to settle, has now to be exposed to the combined action of concentrated sulphuric acid and heat, and for this

purpose is pumped up into the acidifying vessel, in which its temperature is raised to 177° Cent. (350° Fah.) The means of heating is a jet of low-pressure steam, which, in its course from the boiler, passes through a series of iron pipes heated in a furnace. The quantity of acid used is in the proportion of 6 lbs. for 112 lbs. of palm oil. In this operation the palm-oil is decomposed and becomes much blackened. Withdrawn at that period it is seen that an important change has been affected by the action of the acid, as the mass now really crystallizes to a tolerably solid fat. The fat is now drawn off from the acid and transferred to the washing-tank, where it is boiled up with water by means of a steam-jet.

*Distillation.*—After one or two washings the blackened fat is withdrawn, and pumped up to the supply tank, which commands the stills. The stills which are made of copper, are heated by an open grate; each still is capable of holding five tons of fat. When charged the temperature is raised to 293.5° Cent. (560° F.), and low pressure steam passed through the mass. This steam is previously heated by passing through a system of iron pipes placed in a furnace.

The current of steam carries with it the vapor of the fatty acids, and thus facilitates the process. The mixed vapors of fatty acids and water pass together to a series of vertical pipes, which retain a temperature above 100° Cent. 212° F.) where the fats only condense while the steam passes to a second refrigerator, cooled by a current of water; here it is condensed along with the minute quantity of fat carried over by it. A separating tank, from which the water escapes at the bottom, whilst the fats float on the top, serves to recover this small quantity.

*Distillation of the Residue.*—After continuing the distillation for a certain period, the residue in the still is transferred to another still, formed of iron pipes, set in a furnace, and there submitted to a much higher temperature, and a jet of steam more strongly heated. The residue left in these iron stills is a sort of pitch, and is applied to the same uses as ordinary pitch. By this means an additional quantity of fatty acids is obtained.

The fatty acids, as they run from the still, are used to a great extent for the manufacture of candles, without pressing, and form what are called *composite candles*, which possess all the advantages of being self-snuffing, but are more fusible and softer than the pressed stearic acid candles.

A large proportion of the distilled fats, however, is pressed, to make a better sort of candle, and for this purpose fifty hydraulic presses are employed.

*Cold Pressing.*—The fats are spread by ingenious machinery on woven mats, and submitted to powerful cold-pressure between iron plates; the oleic, or metoleic acid runs out, and is collected, and chiefly exported to Germany, where it is employed in soap-making.

*Hot-Pressing.*—After cold-pressing, the fat acids are subjected to hot pressure in hydraulic presses, confined in a chamber heated by steam. The pressed cakes, after the removal of the edges are melted in contact with a little diluted sulphuric acid, and run into blocks. When the reporters visited the works the Company were distilling at the rate of 130 tons of palm-oil per week.—*Ibid.*

THE

# MEDICAL EXAMINER,

AND

## RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. XCV.—NOVEMBER, 1852.

## ORIGINAL COMMUNICATIONS.

*Adhesive Plaster as a means of making Extension in the Compound and other Fractures of the Lower Extremity.* By S. D. Gross, M. D., Professor of Surgery in the University of Louisville.

University of Louisville, Sept. 27th, 1852.

To the Editors of the Medical Examiner.

*Gentlemen:*—Will you be so kind as to grant me a little space in your valuable Journal for a few remarks on the subject of Adhesive Plaster, as a means of making extension in compound and other fractures of the inferior extremity? I am induced to ask this favor, because the origin of this mode of treatment, which has lately attracted considerable attention, and which has been adopted with great advantage, in several sections of our country, has been ascribed to a gentleman who is in nowise entitled to the credit of it, if credit it deserves.

In my work on the "Anatomy, Physiology, and Diseases of the Bones and Joints," composed within a few months after I was invested with the honors of the Doctorate, and published in Philadelphia in the summer of 1830, is the following passage:—

"In complicated fractures of the leg, it not unfrequently happens that the soft parts about the ankle are so much contused, or otherwise injured, as to render it impossible to employ the usual extending bands. When this is found to be the case, the difficulty may usually be remedied by applying along each side of the leg, as high up as the seat of the fracture will admit, a piece of strong muslin, about two feet and a half in length, two inches and a half in width, and spread at one of its extremities with adhesive plaster. The part which is applied upon the limb should be confined by three or four circular strips, so as to keep it firmly in its place, and equalize the extending power. The free extremities of the extending bands should then be tied under the sole of the foot, and be secured to the block or bar which connects the lower ends of the splints. This mode of making extension, for which we are indebted to the ingenuity of my friend and preceptor, Dr. Swift, of this place, will, I am fully persuaded, be found highly useful in practice, and satisfactorily obviate the inconveniences to which I have alluded."

At the time of writing the work here quoted, I was spending a few months at Easton, Pennsylvania, where I had an opportunity of witnessing the excellent effects of this mode of management. Since that period I have omitted no opportunity of employing it in my own practice; and I have never failed, during the last thirteen years, to speak of it prominently before my classes in the University of Louisville.

Dr. Sargent, in his excellent little work on "Bandaging and other Operations of Minor Surgery," ascribes the credit of this method of extension to Dr. E. Wallace, of Philadelphia; and the same statement is reiterated in that gentleman's edition of Mr. Druitt's Surgery, published at Philadelphia in 1848.

Within the last two years, Dr. Josiah Crosby, of New Hampshire, has published a short account of this mode of treatment, in the New Hampshire Journal of Medicine, illustrated by several cases, in which it appears to have been adopted with the happiest effect. In one of these, a compound fracture of the tibia and fibula, the counter-extending band was applied to the upper part of the leg, and the extending band to the lower part of the leg and foot; the plan answered most admirably, and caused not the slightest inconvenience to the patient. Dr. Crosby

states that he has healed two cases of fracture of the clavicle in children two years of age, with nothing but adhesive strips, with as good success as he ever had with the old methods, and with half the trouble. The same mode of treatment has been lately employed with great success in the New York Hospital, in fractures of the inferior extremities.

My conviction is that this plan of making extension deserves to be much more extensively employed than it has hitherto been by my professional brethren. It is particularly applicable to compound and complicated fractures of the leg, but it may also be advantageously resorted to in all cases of fracture of the leg and thigh, in which, on account of injury, excoriation, disease, or excessive morbid sensibility of the ankle, heel, or instep, it is impossible to use the ordinary extending means.

The limb should always, as a matter of course, be shaved before the bands are applied; and the substance of which these bands are composed should be of the most pliant and unyielding character. The adhesive plaster should also be of a very superior quality. The circular strips should not completely encircle the limb, lest they impede the return of the venous blood, and the leg should be carefully bandaged from the toes up, as in the ordinary mode of treatment.

I am, gentlemen, very respectfully,
Your friend and obedient servant.
S. D. Gross.

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*Case of Difficult Labor from Deformity of the Fœtus.* By H. B. Wilson, M. D., of Keedysville, Md.

It was my fortune to be called to an obstetrical case a short time ago, in which the diagnosis was very obscure, and the case rendered tedious and protracted in consequence of the deformed state of the child; a brief narrative of which I append.

The woman, Mrs. H——, was about thirty years of age, and had enjoyed apparently good health previous to her confinement, with the exception of a slight pain occasionally in her right side, and a choaking sensation in her throat when sitting down. She was unusually large for one in her condition, which, no doubt, accounted for the feelings of suffocation which she sometimes experienced. The sharp, lancinating pains, incidental to

the first stage of labor, came on about two o'clock P. M. on Sunday, and continued until four, at which hour I saw her for the first time. Soon after my arrival the "bag of water" broke, and the liquor amnii was discharged, from which time all contractions of the uterus ceased. Upon examination, the *os tincæ* was found to be but partially dilated, and neither titillation of its inner surface, or friction over the region of the womb, with other customary measures, seemed to have any effect in bringing about a renewal of the pains. Some, of a slight, transient character, did occasionally shoot, first in one direction and then in another, but answered no good purpose; and one in particular, deep seated and constant, horizontally across the symphysis pubis, appeared to be a source of greater misery than all the others combined. The ergot of rye was counter-indicated, as yet, on account of the insufficient dilatation of the os uteri, and nature for a time had to be left to take her own course. About 2 A. M., on Saturday morning, the pains again returned, and continued for about half an hour; they were strong, and of long duration. Upon examination, the descending part presented to the touch the feeling of a round, smooth, tense, but yielding tumor, unlike the nates, as it had no fissure, or other marks of that presentation; nor did it resemble an ordinary head presentation, giving to the touch the sensation of a hard, round, bony mass. One thing which seemed rather singular and unusual was the fact of a large, triangular space, with sides about four inches long, situated in the centre of the tumor. Although we were well aware the bones of the fœtal head may be and frequently are separated, still we did not suspect for a moment that this was either of the fontanelles or of the head, not only from its remarkable size, but from the smooth, yielding nature of the surrounding parts. The tumor felt like the smooth, giving abdomen of a child, and the triangular space resembled nothing so much as the surface immediately below the ensiform cartilage of the sternum. Pains continued off and on, throughout the day, until about 7 P. M., when it was thought prudent to send for another physician—Dr. Smith. On his arrival, examinations per vaginam were renewed, and measures taken to hasten the delivery. Ergot was administered, and the forceps brought into requisition, but the size of the tumor would not

admit of their application. Version could have been of no benefit even were it practicable, and the only alternative appeared to be perforation. This we had determined to resort to, when the tumor began to descend, beneath the most powerful contractions of the womb. It soon became manifest that it was a head presentation, a case of hydrocephalus, and that the child was a very monster; the large triangular space being nothing more than the posterior fontanelle. About half past eleven o'clock the case was terminated, having been one of a very protracted and tedious nature. The child was very much deformed, having six fingers and six toes, besides being club-footed. Its head was about three times the ordinary size, large with water, and we think we are within bounds when we say the whole child weighed at least sixteen or eighteen pounds. It had been dead for several days, as it had begun to decompose, emitting a disagreeable smell. As typhoid symptoms were to be apprehended in this case from absorption of the putrid matter, careful measures were taken to guard against anything of the kind, and in twelve or fifteen days we had the satisfaction of seeing our patient restored to health without any untoward results.

*September* 29th, 1852.

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*Mortality of Philadelphia for July, August, and September*, 1852, *arranged from the Record kept at the Health Office.* By WILSON JEWELL, M. D.

In our last quarterly paper, published in the August number of the Examiner, we presented a few general remarks upon the Registration law of this State, and intimated, that the Board of Health had not only discontinued to publish their weekly statement of deaths, but had also declined receiving the certificates of births and deaths from physicians, under an impression that all matters appertaining thereto, had been, by the operation of the Registration law, transferred to the Register of Wills for the city and county of Philadelphia. As one of the results of this view of things connected with the law, the profession and the community at large were deprived of the benefit of a weekly statement of deaths during the month of July. This omission created much dissatisfaction and no little uneasiness in the public mind. The attention of the Board of Health being directed to

the subject, they wisely gave it a careful revision, and found that the registration law neither infringed upon, nor interfered with, any part of the old law, under which they had been acting, "for establishing a health office, and to secure the city and port of Philadelphia from the introduction of pestilential and contagious diseases," passed January 29th, 1818, a part of the 26th section of which, reads as follows:—

"Whenever any person shall die in the city, districts or townships aforesaid, the physician or surgeon who shall have attended such person, as a physician or surgeon, during his or her last sickness, shall leave a note in writing signed with his name, with some one of the family in the house where such person shall have died, specifying the name and apparent age of the deceased, and the disease of which he or she shall have died.

"And that no sexton of any church, or other person having charge of any cemetery, vault or burying ground in the city and county aforesaid, shall permit any dead body to be interred therein, until he has received such note in writing so signed as aforesaid.

"The contents of which note in writing shall be entered by such sexton on a blank schedule to be furnished by the Clerk of the Health office, or such other person as the Board of Health shall direct, and delivered, together with the said schedule, on the Saturday of every week, to the Health office for publication, in such form as may be designated by the Board of Health."

It will be seen at once that the requirements and objects of the health law, are not only well defined, but entirely distinct and separate from the operations of the registration act. The one, affecting a single locality—its object, the preservation of the health of the city and the prevention of nuisances; while the other, looks to widely different and more general purposes, constituting an essential element towards a correct knowledge of the sanitary condition of the State at large, and is intimately allied to the physical and moral prosperity of its citizens.

The Board of Health, after a careful review of the whole subject, reconsidered their former action in the case, and resumed the duty enjoined upon them by the law of 1818, already referred to, of collecting and publishing a weekly statement of deaths occurring in the city and adjoining districts. By this decision we are enabled to continue our quarterly reports.

The returns of deaths made to the Board of Health for the third quarter of the present year, embracing a period extending from July 4th to October 2d, inclusive, making in all thirteen weeks or ninety-one days, amount in the aggregate to 2751.

This gives an increase of mortality of 4½ per cent. over the second quarter of the year.

By deducting the still-born, the deaths from external causes, and from old age, the result shows the number of deaths from disease alone to be 2,497. Of these, the zymotic or epidemic class of diseases, amounting to 980, constitute more than one-third.

Dysentery has prevailed during the quarter to a very great extent, causing the death of 394 individuals, a higher per centage in proportion to the population, than has ever been recorded during any similar period in Philadelphia; constituting about sixteen per cent. of the aggregate of deaths from disease during the three months. For the three quarters of the year ending October 2d, the deaths from dysentery have amounted to 503.

Small pox is rapidly disappearing from our midst. Since June, only twenty-one deaths have been recorded, showing a falling off of eighty-five per cent. from the previous quarter.

The deaths from cholera infantum during July, August, and September, amounted to 273. It is gratifying to know, that the mortality from this fatal disease of infants is on the decline in this city since 1849. From Dr. Ruschenberger's annual report on epidemics, made to and published in the transactions of the College of Physicians, we find that the deaths in

| | |
|---|---|
| 1850 from cholera infantum for the 3d quarter were | 436 |
| 1851 " " " " " " | 344 |
| And according to our present report for | |
| 1852, they only amount to | 273 |

Presenting a reduction of deaths of about 40 per cent. in the two years.

Consumption of the lungs furnish 251 deaths for the quarter, being an increase of 37 over the third quarter of 1850, and nine over that of 1851, according to Dr. Ruschenberger's tables.

The most fatal diseases for the quarter have been as follows: dysentery, 394; cholera infantum, 273; consumption of the lungs, 251; convulsions, 139; marasmus, 131; debility, 114; amounting in the aggregate to 1302 deaths; 767, or more than one-half were among children under five years of age.

It appears that 1378, or more than 50 per cent. of the deaths recorded within the quarter, were among children under five, and nearly one-third of these took place within the first year of life.

## TABLE No. I.

*Deaths for the Third Quarter of* 1852, *classified.*

| | July. | August. | September. | MALE. J. | MALE. A. | MALE. S. | FEMALE. J. | FEMALE. A. | FEMALE. S. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. *Endemic and Contagious Diseases.* Zymotic or Epidemic | 333 | 364 | 283 | 161 | 175 | 140 | 172 | 189 | 143 | 980 |
| 2. *Uncertain or general seat.* Sporadic diseases | 112 | 128 | 138 | 60 | 72 | 77 | 52 | 56 | 61 | 378 |
| 3. The Nervous System | 170 | 126 | 139 | 98 | 67 | 71 | 72 | 59 | 68 | 435 |
| 4. Organs of Respiration | 108 | 120 | 146 | 53 | 62 | 82 | 55 | 58 | 64 | 374 |
| 5. " Circulation | 12 | 7 | 18 | 6 | 3 | 14 | 6 | 4 | 4 | 37 |
| 6. The Digestive Organs | 55 | 61 | 70 | 30 | 40 | 32 | 25 | 21 | 38 | 186 |
| 7. The Urinary Organs | 2 | 1 | | 2 | 1 | | | | | 3 |
| 8. The Organs of Generation | 9 | 12 | 9 | 2 | 3 | 2 | 7 | 9 | 7 | 30 |
| 9. " Locomotion | 4 | 4 | 2 | 3 | 3 | | 1 | 1 | 2 | 10 |
| 10. The Integumentary System | 2 | 2 | | 1 | | | 1 | 2 | | 4 |
| 11. Old Age | 9 | 8 | 13 | 2 | 2 | 3 | 7 | 6 | 10 | 30 |
| 12. External Causes | 33 | 34 | 39 | 28 | 27 | 29 | 5 | 7 | 10 | 106 |
| Still Born | 36 | 38 | 44 | 17 | 21 | 25 | 19 | 17 | 19 | 118 |
| Unknown | 19 | 18 | 23 | 8 | 11 | 13 | 11 | 7 | 10 | 60 |
| | 904 | 923 | 924 | 471 | 487 | 488 | 433 | 436 | 436 | 2751 |

## TABLE No. II.

1. *Endemic and Contagious Diseases.—Zymotic or Epidemic.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cholera Infantum | 144 | 129 | 165 | 89 | 18 | 1 | | | | | | | | | | | | 273 |
| " Morbus | 5 | 10 | 1 | 1 | | 1 | 1 | 2 | | 3 | 1 | 1 | 3 | 1 | | | | 15 |
| Croup | 11 | 17 | 4 | 11 | 10 | 3 | | | | | | | | | | | | 28 |
| Diarrhœa | 38 | 39 | 41 | 16 | 3 | | | | 2 | 4 | 1 | 3 | 3 | 2 | 2 | | | 77 |
| Dysentery | 182 | 212 | 58 | 64 | 53 | 34 | 9 | 12 | 34 | 38 | 29 | 24 | 18 | 17 | 2 | 1 | 1 | 394 |
| Erysipelas | 7 | 7 | 3 | | | | | | 3 | 2 | 3 | 2 | | | 1 | | | 14 |
| Fever | 4 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | | | | | | | 5 |
| " Bilious | 3 | 1 | | | | | | | | 2 | | 1 | 1 | | | | | 4 |
| " Catarrhal | 1 | | | | 1 | | | | | | | | | | | | | 1 |
| " Congestive | 3 | 1 | 1 | | | 1 | | 1 | 1 | | | | | | | | | 4 |
| " Hectic | 1 | 5 | 2 | | | 1 | | | 2 | 1 | | | | | | | | 6 |
| " Intermittent | 1 | 1 | 1 | | | | | | | | | | 1 | | | | | 2 |
| " Remittent | 9 | 6 | | 1 | 3 | | | 1 | 1 | 4 | 2 | 1 | 1 | | 1 | | | 15 |
| " Scarlet | 17 | 26 | 4 | 11 | 16 | 7 | 4 | | 1 | | | | | | | | | 43 |
| " Synocha | 1 | | | | | | | | | 1 | | | | | | | | 1 |
| " Typhus | 16 | 14 | | 2 | 1 | 1 | 1 | 3 | 10 | 7 | 5 | | | | | | | 30 |
| " Typhoid | 18 | 14 | | 1 | 1 | 1 | 1 | 2 | 5 | 7 | 1 | 3 | 7 | 2 | 1 | | | 32 |
| Hooping Cough | 3 | 1 | 3 | 1 | | | | | | | | | | | | | | 4 |
| Measles | 4 | 2 | 1 | 3 | 2 | | | | | | | | | | | | | 6 |
| Small Pox | 7 | 14 | 7 | 6 | 6 | 1 | | | 1 | | | | | | | | | 21 |
| Syphilis | 1 | 1 | | | | | | | 1 | 1 | | | | | | | | 2 |
| Varioloid | | 3 | 1 | | 2 | | | | | | | | | | | | | 3 |
| | 476 | 504 | 293 | 207 | 116 | 51 | 16 | 21 | 62 | 71 | 43 | 35 | 34 | 22 | 7 | 1 | 1 | 980 |

2. *Uncertain or General Seat.—Sporadic Diseases.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abscess | | 1 | 1 | | | | | | | | | | | | | | | 1 |
| Cancer | 1 | 3 | | | | | | | | 2 | 1 | | 1 | | | | | 4 |
| " Breast | | 3 | | | | | | | 1 | | 1 | | 1 | | | | | 3 |
| " Mouth | 1 | 1 | | | | 1 | | | | | 1 | | | | | | | 2 |
| Congestion | 1 | | | | | | | | | 1 | | | | | | | | 1 |
| Cyanosis | 4 | 1 | 3 | | | 1 | | | 1 | | | | | | | | | 5 |
| Debility | 65 | 49 | 42 | 9 | 6 | 5 | 1 | 1 | 5 | 4 | 8 | 4 | 13 | 12 | 3 | 1 | | 114 |
| Disease of Mouth | | 2 | 1 | 1 | | | | | | | | | | | | | | 2 |
| " of Neck | 1 | | | | | | | | | 1 | | | | | | | | 1 |
| Dropsy | 18 | 17 | 3 | 3 | 3 | 1 | | | 2 | 4 | 4 | 4 | 8 | 3 | | | | 35 |
| Gangrene | | 4 | | | | | | | | | | | 2 | 2 | | | | 4 |
| " of Foot | | 1 | | | | | | | | | | 1 | | | | | | 1 |
| " of Mouth | | 1 | | 1 | | | | | | | | | | | | | | 1 |
| Hemorrhage | 3 | 1 | | 1 | | | | | 2 | | 1 | | | | | | | 4 |
| " from Umbilicus | | 1 | | | | | | | | 1 | | | | | | | | 1 |
| Inanition | 15 | 15 | 28 | 1 | | | | | | | | | | | 1 | | | 30 |
| Inflammation | 2 | | 1 | 1 | | | | | | | | | | | | | | 2 |
| Marasmus | 79 | 52 | 84 | 28 | 9 | 2 | 1 | 1 | 1 | | 2 | 1 | 1 | 1 | | | | 131 |
| Malformation | 5 | 2 | 7 | | | | | | | | | | | | | | | 7 |
| Melœna | 1 | 1 | | | | | | | | | | 1 | 1 | | | | | 2 |
| Mortification | 1 | | | | 1 | | | | | | | | | | | | | 1 |
| Scrofula | 5 | 3 | 2 | 1 | 2 | 1 | | | 2 | | | | | | | | | 8 |
| Tabes Mesenterica | 6 | 8 | 5 | 4 | 3 | | | 2 | | | | | | | | | | 14 |
| Tumour | | 2 | | | | | | 1 | | | | 1 | | | | | | 2 |
| " of Mouth | 1 | | | | | | | | | | | 1 | | | | | | 1 |
| Ulceration | | 1 | | | | | | | 1 | | | | | | | | | 1 |
| | 209 | 169 | 177 | 50 | 24 | 11 | 2 | 5 | 15 | 13 | 18 | 13 | 27 | 18 | 4 | 1 | | 378 |

3. *Of the Nervous System.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15 | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abscess of Brain | | 1 | | | | | 1 | | | | | | | | | | | 1 |
| Apoplexy | 9 | 11 | 1 | | | | 1 | | 2 | 1 | 1 | 3 | 3 | 4 | 4 | | | 20 |
| Catalepsy | | 1 | | | | | | | 1 | | | | | | | | | 1 |
| Concussion of Brain | 1 | | | | | | 1 | | | | | | | | | | | 1 |
| Congestion " | 21 | 10 | 10 | 5 | 3 | 2 | | 2 | 4 | | 1 | | 3 | 1 | | | | 31 |
| Convulsions | 62 | 77 | 79 | 29 | 14 | 5 | 1 | | 6 | 1 | 1 | 1 | 2 | | | | | 139 |
| " Puerperal | | 5 | | | | | | 1 | 1 | 3 | | | | | | | | 5 |
| Coup de Soleil | 2 | | | | | | | | 1 | 1 | | | | | | | | 2 |
| Cramp | 1 | | 1 | | | | | | | | | | | | | | | 1 |
| Disease of Brain | 14 | 8 | 9 | 7 | 3 | | | | | | 1 | 2 | | | | | | 22 |
| Dropsy " | 41 | 27 | 27 | 22 | 9 | 5 | | 1 | 1 | | 2 | | 1 | | | | | 68 |
| Effusion " | 16 | 8 | 14 | 4 | 1 | 1 | | | 2 | | | 1 | | 1 | | | | 24 |
| Enlargement " | | 1 | 1 | | | | | | | | | | | | | | | 1 |
| Fever " | 1 | | 1 | | | | | | | | | | | | | | | 1 |
| Inflammation " | 41 | 31 | 20 | 18 | 13 | 6 | 3 | 5 | | 2 | 3 | 1 | 1 | | | | | 72 |
| Epilepsy | 3 | 1 | | | 1 | | | | 1 | | 1 | | 1 | | | | | 4 |
| Mania | 3 | 4 | | | | | | | 1 | 1 | 3 | 1 | 1 | | | | | 7 |
| " a potu | 6 | 1 | | | | | | | | 3 | | 2 | 1 | 1 | | | | 7 |
| Palsy | 9 | 12 | | | 1 | 1 | | | 2 | | 1 | 1 | 6 | 4 | 5 | | | 21 |
| Softening of Brain | 3 | 1 | | | | | | | 1 | | 2 | 1 | | | | | | 4 |
| Tetanus | 3 | | 1 | | | | | | 1 | | | 1 | | | | | | 3 |

### 4. *Organs of Respiration.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abscess of Lungs | 1 | 1 | | 1 | | | | | | | | | 1 | | | | | 2 |
| Asthma | 2 | 2 | 1 | | | | | | | 1 | 1 | | | 1 | | | | 4 |
| Cancer of Larynx | | 1 | | | | | | | | 1 | | | | | | | | 1 |
| Congestion of Lungs | 5 | 8 | 4 | 1 | 2 | | | | 1 | 4 | 1 | | | | | | | 13 |
| Consumption " | 124 | 127 | 7 | 5 | 8 | 7 | 5 | 14 | 84 | 53 | 36 | 17 | 12 | 3 | | | | 251 |
| Disease of Lungs | 2 | 1 | | | | | | | 1 | 2 | | | | | | | | 3 |
| " Chest | 1 | | | | | | | | | | 1 | | | | | | | 1 |
| Dropsy of Chest | 8 | 2 | 1 | | 3 | 1 | | | 1 | 1 | | 1 | 1 | 1 | | | | 10 |
| Effusion " | | 1 | | | | | | | | | | | 1 | | | | | 1 |
| " Lungs | 1 | 1 | | | | 1 | | | | 1 | | | | | | | | 2 |
| Hemorrhage " | 3 | | | | | | | | | 2 | 1 | | | | | | | 3 |
| Inflammation Bronchiæ | 14 | 7 | 7 | 5 | | 1 | | | 3 | 3 | 1 | 1 | | | | | | 21 |
| " Chest | 1 | | 1 | | | | | | | | | | | | | | | 1 |
| " Larynx | 1 | | | | | | 1 | | | | | | | | | | | 1 |
| " Lungs | 22 | 19 | 16 | 5 | 6 | 2 | 2 | | 6 | 2 | | 1 | | | 1 | | | 41 |
| " Pleura | 1 | 2 | | | | | | | | | | 3 | | | | | | 3 |
| " Throat | 2 | 1 | 1 | | | | | 1 | | | | | | 1 | | | | 3 |
| Obstruction of Trachea | | 1 | | 1 | | | | | | | | | | | | | | 1 |
| Tuberculosis | 9 | 3 | | 4 | | 1 | | | 2 | 1 | 2 | 1 | 1 | | | | | 12 |
| | 197 | 177 | 38 | 22 | 19 | 13 | 8 | 15 | 98 | 71 | 43 | 24 | 16 | 6 | 1 | | | 374 |

### 5. *Organs of Circulation.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Angina Pectoris | 1 | | | | | | | | 1 | | | | | | | | | 1 |
| Disease of Heart | 12 | 8 | 2 | 1 | 2 | | | | 3 | 5 | 4 | 2 | 1 | | | | | 20 |
| Dropsy " | 4 | 3 | 1 | | 1 | | 1 | | | 1 | | 1 | 1 | 1 | | | | 7 |
| Enlargement of Heart | 4 | 2 | | | | | 1 | | 1 | | 1 | 2 | 1 | | | | | 6 |
| Inflammation " | 1 | | | | | | | | | | | 1 | | | | | | 1 |
| Ossification " | 1 | 1 | | | | | | | | | | | | | 2 | | | 2 |
| | 23 | 14 | 3 | 1 | 3 | | 2 | | 5 | 6 | 5 | 6 | 3 | 1 | 2 | | | 37 |

6. *Digestive Organs.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abscess of Liver | 2 | | | | | | | | 1 | 1 | | | | | | | | 2 |
| Abdominal Dropsy | 11 | 3 | | | 1 | | | | 1 | 6 | 2 | 1 | 2 | 1 | | | | 14 |
| Cancer, Liver | | 1 | | | | | | | | | | 1 | | | | | | 1 |
| " Stomach | | 1 | | | | | | | | | | | 1 | | | | | 1 |
| Cancrum Oris | 1 | | | 1 | | | | | | | | | | | | | | 1 |
| Colic | 1 | 1 | 2 | | | | | | | | | | | | | | | 2 |
| Cirrhosis of Liver | 4 | 1 | | | | | | | 1 | 1 | 1 | | | 2 | | | | 5 |
| Congestion of Bowels | 2 | | 1 | | | | | | | | | 1 | | | | | | 2 |
| Constipation | 1 | | | | | | | | 1 | | | | | | | | | 1 |
| Consumption of Bowels | | 3 | | | 2 | | | | | 1 | | | | | | | | 3 |
| Disease of Abdomen | 1 | | 1 | | | | | | | | | | | | | | | 1 |
| " Bowels | 1 | 1 | 2 | | | | | | | | | | | | | | | 2 |
| " Liver | 2 | 2 | 1 | | | | | | | 1 | 2 | | | | | | | 4 |
| " Stomach | 2 | 2 | 2 | | | | | | 1 | | | 1 | | | | | | 4 |
| " Stomach& bowels | 1 | | 1 | | | | | | | | | | | | | | | 1 |
| Hemorrhage of Bowels | 1 | 1 | 1 | | | | | | | 1 | | | | | | | | 2 |
| Hernia, strangulated | 1 | | | | | | | | | | | 1 | | | | | | 1 |
| Induration of Liver | | 1 | | | | | | | | | | | | 1 | | | | 1 |
| Inflammation of Bowels | 1 | 2 | | 1 | | | | | | 2 | | | | | | | | 3 |
| " Liver | 4 | 5 | 1 | 1 | | 1 | | | 2 | | 1 | 1 | 2 | | | | | 9 |
| " Peritoneum | 2 | 7 | | | | 1 | 2 | 1 | 3 | | 1 | | | | 1 | | | 9 |
| Inflam. Stomach & Bowels | 45 | 39 | 15 | 14 | 12 | 3 | 1 | 3 | 7 | 7 | 7 | 7 | 5 | 2 | 1 | | | 84 |
| Intussusception | | 2 | | | | | | | 2 | | | | | | | | | 2 |
| Jaundice | 3 | 2 | 3 | | | | | | | | | | 2 | | | | | 5 |
| Mortification Bowels | 2 | | | | 1 | | 1 | | | | | | | | | | | 2 |
| Obstruction Bowels | 1 | 1 | | | | | | 1 | | | | | | | 1 | | | 2 |
| Rupture " | 1 | | | | | 1 | | | | | | | | | | | | 1 |
| Scirrhus Mesentery | 1 | | | | | | | | | | | | 1 | | | | | 1 |
| " Stomach | | 1 | | | | | | | | | 1 | | | | | | | 1 |
| Softening Stomach | | 1 | | | 1 | | | | | | | | | | | | | 1 |
| Teething | 2 | 4 | 2 | 4 | | | | | | | | | | | | | | 6 |
| Ulceration of Bowels | 4 | | | | | | | | | 1 | 2 | | 1 | | | | | 4 |
| " Stomach | 1 | 1 | | | | | | | | 1 | | | 1 | | | | | 2 |
| " Throat | 3 | 2 | 1 | 1 | | 2 | | 1 | | | | | | | | | | 5 |
| Worms | 1 | | | | | 1 | | | | | | | | | | | | 1 |
| | 102 | 84 | 33 | 22 | 17 | 9 | 4 | 6 | 19 | 22 | 17 | 13 | 15 | 6 | 3 | | | 186 |

7. *The Urinary Organs.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Albuminuria | 1 | | | | | | | | | | 1 | | | | | | | 1 |
| Inflam. of Kidneys | 2 | | | | | | | | | | | | 1 | 1 | | | | 2 |
| | 3 | | | | | | | | | | 1 | | 1 | 1 | | | | 3 |

### 8. *Organs of Generation.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abortion | | 1 | | | | | | | 1 | | | | | | | | | 1 |
| Cancer Uterus | | 2 | | | | | | | | | 1 | | 1 | | | | | 2 |
| Disease of Urinary Organs | 1 | | | | | | | | | | | | | 1 | | | | 1 |
| " Uterus | | 2 | | | | | | | | | 1 | | 1 | | | | | 2 |
| Hysteritis | | 1 | | | | | | | | | | | 1 | | | | | 1 |
| Hemorrhage from Uterus | | 4 | | | | | | | 1 | 2 | 1 | | | | | | | 4 |
| Inflammation " | | 6 | | | | | | | 4 | 2 | | | | | | | | 6 |
| Inflam. of Bladder | 2 | | | 1 | | | | | | | | | | 1 | | | | 2 |
| Orchitis | 1 | | | | | | | | | | 1 | | | | | | | 1 |
| Prostatic Disease | 1 | | | | | | | | | | | 1 | | | | | | 1 |
| Puerperal Fever | | 5 | | | | | | | 2 | 2 | 1 | | | | | | | 5 |
| " Mania | | 1 | | | | | | | | 1 | | | | | | | | 1 |
| Strangury | 1 | | | | | | | | | | | | | 1 | | | | 1 |
| Ulceration of Urethra | 1 | | | | | | | | | | 1 | | | | | | | 1 |
| " Uterus | | 1 | | | | | | | | | 1 | | | | | | | 1 |
| | 7 | 23 | 1 | | | | | | 8 | 7 | 7 | 1 | 3 | 3 | | | | 30 |

### 9. *Organs of Locomotion.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Caries of Spine | 1 | | | | | | | | | | 1 | | | | | | | 1 |
| Disease of Knee Joint | 1 | | | | | | | | 1 | | | | | | | | | 1 |
| " Hip Joint | | 1 | | | | | | 1 | | | | | | | | | | 1 |
| Inflam. of Spinal Marrow | 1 | 1 | 1 | | | | | | | 1 | | | | | | | | 3 |
| Rheumatism | 3 | 2 | | | | | | | 2 | 1 | | | 1 | 1 | | | | 5 |
| | 6 | 4 | 1 | | | | | 1 | 3 | 2 | 1 | | 1 | 1 | | | | 10 |

### 10. *The Integumentary System.*

| | Male. | Female. | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Carbuncle | | 2 | 1 | | | | | | | | | | | | | | | 2 |
| Purpura Hemorrhagica | | 1 | 1 | | | | | | | | | | 1 | | | | | 1 |
| Scorbutus | 1 | | | | | | | | | | 1 | | | | | | | 1 |
| | 1 | 3 | 2 | | | | | | | | 1 | | 1 | | | | | 1 |

### 11. *Old Age.*

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Old Age | 7 | 23 | | | | | | | | | | | 1 | 9 | 13 | 5 | 2 | 30 |

12. *From External Causes.*

| | Male. | Female | Under 1 yr. | 1 to 2. | 2 to 5. | 5 to 10. | 10 to 15. | 15 to 20. | 20 to 30. | 30 to 40. | 40 to 50. | 50 to 60. | 60 to 70. | 70 to 80. | 80 to 90. | 90 to 100. | 100 to 110. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Asphyxia | 4 | 2 | 5 | | | | | | 1 | | | | | | | | | 6 |
| Burns and Scalds | 2 | 4 | 1 | 1 | 1 | 2 | | | | | 1 | | | | | | | 6 |
| Casualties | 30 | 4 | 2 | 1 | 1 | 2 | 1 | 3 | 8 | 5 | 5 | 2 | 2 | | 1 | 1 | | 34 |
| Drowned | 30 | 3 | | | 3 | 2 | 3 | 1 | 6 | 2 | 8 | 5 | | 3 | | | | 33 |
| Fracture Pelvis | 1 | | | | | | | | 1 | | | | | | | | | 1 |
| " Skull | 2 | | | | | | 1 | | 1 | | | | | | | | | 2 |
| Intemperance | 12 | 7 | | | | | | | 3 | 5 | 3 | 4 | 4 | | | | | 19 |
| Suicide | 1 | 2 | | | | | | | 3 | | | | | | | | | 3 |
| Violence | 1 | | 1 | | | | | | | | | | | | | | | 1 |
| Wound | 1 | | | | | | | | 1 | | | | | | | | | 1 |
| | 84 | 22 | 9 | 2 | 5 | 6 | 5 | 4 | 24 | 12 | 17 | 11 | 6 | 3 | 1 | 1 | | 106 |
| Unknown | 32 | 28 | 23 | 3 | 3 | | | 2 | 7 | 4 | 10 | 3 | 2 | 2 | | 1 | | 60 |
| Still Born | 63 | 55 | 118 | | | | | | | | | | | | | | | 118 |

## TABLE NO. 3.

*Deaths for the Third quarter, at fifteen distinct periods of life.*

| | |
|---|---|
| Under 1 year, | 744 |
| 1 to 2 | 392 |
| 2 to 5 | 232 |
| 5 to 10 | 110 |
| 10 to 15 | 44 |
| 15 to 20 | 63 |
| 20 to 30 | 265 |
| 30 to 40 | 220 |
| 40 to 50 | 179 |
| 50 to 60 | 120 |
| 60 to 70 | 129 |
| 70 to 80 | 83 |
| 80 to 90 | 40 |
| 90 to 100 | 9 |
| 100 to 110 | 3 |
| | 2633 |
| Still Born | 118 |
| Total, | 2751 |

The deaths in the Blockley Almshouse for the quarter, amounted to 225; among people of color, 186; and from the country, 43, as follows:

| | Almshouse. | Blacks. | Country. |
|---|---|---|---|
| July, | 69 | 63 | 18 |
| August, | 71 | 51 | 17 |
| September, | 85 | 72 | 8 |
| Total, | 225 | 186 | 43 |

*Experimental Researches applied to Physiology and Pathology.*
By E. BROWN-SÉQUARD, M. D., of Paris.

(Continued.)

## XIX.—ON THE MODE OF ACTION OF SOME OF THE MOST ACTIVE POISONS UPON THE NERVOUS SYSTEM.

Some of the results of my experiments on this subject have already been published in the inaugural dissertation of my learned friend and pupil, Dr. F. W. Bonnefin, with whom I performed most of these experiments.*

I intend to give here only the results of my researches on the poisons which produce convulsions. For the sake of brevity I have called them *convulsing* poisons. The most important among them are: strychnine, brucine, picrotoxine, morphine, digitaline, cyanhydric acid, nicotine, cyanide of mercury, sulphide of carbon, chloride of barium, and oxalic acid.

The principal questions which I have endeavored to solve are the following:

1. What is the part of the animal frame upon which these poisons act in producing convulsions?

2. By what mode of action do they produce convulsions?

The parts of the body on which they could act are:—

*a.* The nervous centres.

*b.* The motor or centrifugal nerves.

*c.* The sensitive or centripetal nerves.

*d.* The muscles.

Of course, the convulsing poisons could act upon these four parts together, or upon two or three of them.

Now, as to the mode of action, these poisons could produce convulsions *directly* or *indirectly*.

In other words these poisons might act:—1. As *excitants* either of the muscles or of the nervous system, and this is what I call a direct action. 2. As causes of increase of the vital powers of the muscles or of the nervous system, so that even a slight excitation of these parts is able to produce convulsions, and this is what I call an indirect action.

* Rech. Expérim. sur l'action convulsivante des principaux Poisons, in 4 Paris, 1851.

The convulsing poisons do not appear to excite the muscles or any part of the nervous system, and consequently they do not act directly. They act merely in increasing the vital powers of the nervous system, so that a slight excitation of the skin or another part where there exist nerves of sensation is sufficient to produce convulsions. Therefore these poisons act indirectly in the production of convulsions. They do not produce convulsions, they merely act upon the nervous system, so as to render it capable of producing convulsions when it receives an excitation. They do not excite the nervous system, and their mode of action is altogether different from that of the mechanical, physical, and chemical excitations which directly produce convulsions, when they are applied to the medulla oblongata, or to the spinal cord.

This mode of action was already known as regards strychnine. Long ago Mr. Magendie* found that animals poisoned by *nux vomica*, frequently remain without convulsions as long as they are left without excitation, but that fits are immediately produced when they are touched. Since that time Stannius,† Van Deen,‡ Pickford,‖ J. W. Arnold,§ Meyer, of Zurich,¶ Marshall Hall,** and A. Barnard,†† have observed many facts proving that strychnine does not directly produce convulsions. The following experiment, which I performed with the assistance of Dr. Bonnefin, is still more demonstrative.

I introduce a large dose of strychnine into the stomach of a frog, after the removal of its brain and of its medulla oblongata. As the voluntary and the respiratory movements are then impossible, there is no spontaneous movement at all, and if the animal is left perfectly quiet there are no convulsions. But as soon as it is excited, even by the slightest touch, tetanus occurs.

In this case, it is evident that the convulsive fit is merely a re-

* Examen de l'action de quelques végétaux sur la Moelle épinière. Paris 1809, p. 7.

† Mueller's Archiv. 1837, p. 223.

‡ Traités et découvertes sur la Moelle épinière, 1841, p. 123,

‖ In Rorer und Urarderlich's Vierteljaheschrift. Bd. 2, 1843, p. 430.

§ Ueber die verrichtung der Werzeln der Rückenmarksnerven, 1844.

¶ Schmidt's Jahrbücher, 1847, No. 8.

** Comptes rendus de l'Acad. des Sciences, 1847, vol. 24, p. 1054.

†† Procès verbaux de la Société Philomatique, 1847, p. 71.

flex act. But why is there a tetanic contraction instead of the regular reflex movements? The reason is that the reflex faculty is considerably increased. This will be proved in a moment.

Before giving this demonstration, I must examine if there is not also an increase in the vital powers of the muscles and of the motor nerves. There was no reason to reject the supposition that the convulsing poisons were capable of increasing simultaneously the vital powers of the nervous centres, of the nerves, and of the muscles. Consequently, I was led to perform the following experiments, which prove:—1st, that these poisons do not increase the vital powers of the motor nerves and of muscles; 2d, that they do not act as direct excitants upon these organs.

On young cats, on birds, and on reptiles, I removed the whole portion of the spinal cord which supplies nerves to the posterior limbs. A few minutes after, I injected into the rectum a solution of a salt of strychnine. Convulsions occurred only in the anterior parts of the body, and when I excited either the motor nerves or the muscles of the posterior limbs, contractions were produced exactly as in animals not poisoned, but there was no appearance of convulsions.

When the poison was placed directly on muscles or on nerves, or when it was injected with blood in a limb separated from the body, there was no appearance either of an excitation, or of an increase in the excitability of the muscles, or of the motor nerves.

The experiments of Magendie, of Emmert,* and of Backer,† have demonstrated that after a transverse section of the spinal cord, between its two enlargements, convulsions may be produced in the palsied limbs, when the animal is poisoned with strychnine. All the physiologists who have performed this experiment have found it perfectly exact. Nevertheless, J. W. Arnold,‡ maintains that the action is much less considerable in the posterior limbs, in that case, than when the spinal cord is uninjured and united with the medulla oblongata, and he concludes that the poison

* Exper. de effectu venenorum veget. americ. in corpus animale, 1817.

† Commentatio ad questionem physiol., ab Acad. Rheno traject, anno 1828, propositam.

‡ Die lehre von der Reflex-function. Chap. ix. and x. 1842.

acts much more on the medulla oblongata than on the spinal cord.

Sometimes, as Arnold says, it occurs that the action of strychnine, in mammalia and in amphibia, is not so powerful in the palsied parts, after the section of the spinal cord, as in the non-palsied limbs. As to mammalia, the reason of this difference is the diminution in the quantity of blood received by the part of the spinal marrow separated from the encephalon. As to amphibia, it is easily seen that immediately after the section of their spinal cord, the reflex faculty in the part separated from the encephalon is very weak, and if, then, strychnine is given to the animal, it does not act very strongly; but if the poison is given two or three hours after the section of the spinal cord, then the reflex faculty is very powerful and the poison acts violently, and sometimes more than if the spinal cord was uninjured. In birds, which, as I have discovered, have constantly a powerful reflex faculty after the section of the spinal cord, strychnine acts very energetically.

Lately, Stannius and Cl. Bernard have supposed that strychnine, instead of acting on the spinal marrow, acted on the nerves of sensibility, and more particularly on their termination in the skin. They base this hypothesis on some experiments, of which only one is important. After the section of the spinal cord, at the brachial enlargement, upon a frog, the animal is poisoned with strychnine, and then convulsions occur nearly at each voluntary or respiratory movement. But if the sensitive roots of the spinal nerves are cut, the convulsions cease immediately.

Now, it is evident that this fact does not prove what Stannius and Bernard have supposed; because it may be explained as well by admitting that convulsions are produced only in consequence of an increase of the reflex faculty of the spinal cord, as by the hypothesis of Stannius.

Van Deen * relates an experiment which is in opposition to the theory of Stannius. If we take a frog prepared exactly as in the experiment of this physiologist, we see that tetanus occurs when the animal is thrown on the floor. In this case tetanus is produced, although the sensitive roots are cut and unable to act; therefore tetanus is a consequence of an increased

* Loco cit. p. 123.

vitality in the spinal cord itself. But this experiment is not decisive, because sometimes it occurs that such a mechanical excitation in frogs, which have not been poisoned, produces tetanus. Nevertheless I must say that the tetanus in this last case is never so violent as in poisoned frogs.

A better experiment is to excite slightly with a needle, the posterior columns of the spinal cord. Then, tetanus constantly occurs in poisoned frogs, although the sensitive roots are divided, and it very rarely occurs in frogs that are not poisoned.

I have already published* the following experiments, which are much more decisive against the hypothesis of Stannius:

A ligature is put around the aorta of a frog, near its termination in the abdomen, and consequently the posterior limbs cease to receive blood. Then the frog is poisoned with strychnine introduced into its mouth, and after a few minutes the convulsive phenomena take place.

In this experiment the nerves of the posterior limbs do not receive strychnine, whilst the spinal cord receives it; therefore convulsions are not produced in consequence of an action of strychnine on the sensitive nerves of the skin, as Stannius has supposed, but in consequence of its action on the spinal cord.

Now, if we poison a frog after having divided the spinal cord at the brachial enlargement, and after the section of all the small arteries giving blood to the spinal column, we see that convulsions do not take place in the posterior limbs, although the reflex faculty is not lost in consequence of the cessation of the circulation in the spinal cord, and that it remains for half an hour or a little more in summer, and about two hours in winter.

In this experiment, blood containing strychnine reaches the sensitive nerves of the posterior limbs, and not the spinal cord, and there are no convulsions; therefore it is not on the sensitive nerves that strychnine acts in order to produce convulsions.

These two experiments are evidently decisive. In the first, we see that when blood containing strychnine reaches the spinal cord, and not the cutaneous nerves, there are convulsions; and in the second, we see that when blood containing strychnine reaches the sensitive nerves and not the spinal cord, there

* Gaz. Med. de Paris, 1849, p. 745.

are no convulsions. We must consequently draw from these experiments these two conclusions:

1. Strychnine does not act upon the sensitive nerves.
2. Strychnine acts upon the spinal cord.

Now, from all the facts above related, two other conclusions are to be drawn:

1. Strychnine does not excite the nervous system; or, in other words, strychnine does not produce convulsions directly.
2. Strychnine increases the reflex faculty of the spinal cord, and so produces convulsions indirectly.

I do not intend to examine here whether strychnine kills in producing convulsions, or by another action. Nevertheless, I will say, that although convulsions are sufficient to kill in asphyxiating, death, in cases of poisoning by strychnine, may be also produced by another action of that poison. I have seen animals in which convulsions did not take place at all, and which have been killed by strychnine.

The other convulsing poisons that I have studied, appear to act as strychnine, as to the production of convulsions.

The same experiments which I have related as regards strychnine, have been performed with these poisons, and I have obtained the same results. Sometimes, nevertheless, I found some differences; and, for instance, it appears that the chloride of barium is a direct exciter of the muscular fibres, and cyanhydric and oxalic acids seem also to be slight but direct exciters of the spinal cord.

The action of the chloride of barium is very important, because that poison is an exciter of the muscular fibres, and not of the nerves. This fact proves that the muscular irritability may be put in action without the intervention of the nerves.

The increase of the reflex faculty, by the convulsing poisons, is a very important fact. How is that increase produced? We believe it takes place in consequence of an increase in the nutrition of the nervous centres. J. Mueller* is of opinion that there is no substance able to increase directly the vital properties of any organ. He says that nutrition alone is able to produce such an effect. I believe he is perfectly right, and I admit that the mode of action of the convulsing poisons, in the

* Manuel de Physiol., edited by Littre, 1851, t. i. p. 582.

production of convulsions, is merely to increase nutrition in the nervous centres. It is important for practitioners to know that mode of action. The usefulness of strychnine in many cases of palsy, may be explained very easily by that action. I have frequently seen, in the wards of the hospital *la Charité* at Paris, paralytics under the care of Dr. Rayer, taking strychnine. Every day the reflex faculty was increasing in them as long as they took that substance; and on the contrary, when the use of that medicament was stopped, the reflex faculty began immediately to diminish, and in some patients it disappeared. If strychnine was given anew, the reflex faculty was still increased. These facts have been recorded with great care by my learned friend, Mr. Chareot. I hope he will publish them.

From all the facts narrated in this paper, I believe I am entitled to draw the following conclusions:

1. The convulsing poisons, more particularly strychnine, brucine, picrotoxine, cyanhydric acid, nicotine, morphine, cyanide of mercury, sulphide of carbon, digitaline, oxalic acid, appear to produce convulsions, without acting either directly or indirectly on the muscles or on the motor or sensible nerves.

2. Generally these poisons do not appear to produce convulsions in acting directly on any part of the nervous centres.

3. These poisons, in producing convulsions, act only on the parts of the nervous system endowed with the reflex faculty.

4. The mode of action of these poisons consists in the increase of the nutrition of the nervous centres, by which excess of nutrition the reflex faculty becomes much increased.

## XX.—ON THE CROSSED TRANSMISSION OF IMPRESSIONS IN THE SPINAL CORD.

Numerous experiments which I have performed have proved to the numerous physicians and students, who have seen the most important of them, that the impressions made on one side of the body are transmitted to the sensorium by the opposite side of the spinal cord.

It is known that Galen* performed two experiments, which

*See: De locis affectis, lib. iii. cap. xiv; or De anatomicis admonstrationibus, lib. viii. sect. 6.

have been considered as demonstrating that there is no *crossed* action in the spinal cord.

One of these experiments of Galen consisted in the transversal section of a lateral half of the spinal marrow. After this operation the animal was paralyzed in all the parts situated behind the section, on the same side, so that the palsy was on the right side of the body when the right side of the spinal cord was divided, and *vice versa.*

The second experiment consisted in a longitudinal section on the middle line of the spinal cord so as to separate into two lateral halves the part of that nervous centre supplying nerves to the posterior limbs. After this operation the animal was able to walk.

Galen, in these two experiments did not examine the state of the sensibility. He speaks merely of the voluntary movements. Nevertheless his researches were considered in this century as completely proving that there is no crossing of action in the spinal cord, either for sensibility or for voluntary movement.

The following experiments will prove that there is a crossing of action for sensibility in that organ:

1st. If a lateral half (*i. e.* the posterior and the antero-lateral columns and the gray matter of one side of the spinal cord), is divided transversely at the level of the tenth costal vertebra, on a mammal, it is soon evident that the sensibility is much diminished in the posterior limb opposite to the side of the sections. On the contrary the sensibility instead of being lost appears much increased in the posterior limb on the side where the section has been made.

2d. If, instead of one transversal section of the spinal cord, two, three, four or many more are made on the same lateral half of that organ, the same results are obtained.

3d. If, instead of mere sections, a removal of a part of a lateral half of the spinal cord, is effected, the same results are still obtained. In performing this experiment a longitudinal section, one inch in length, from behind forward, is made in the median plane of the spinal marrow, and then two transversal sections on a lateral half are made at the extremities of the longitudinal section, so that a part of the cord is completely separated from that organ and afterwards removed.

4th. If instead of dividing entirely a lateral half of the spinal cord, a small part is left undivided towards the centre of that organ, the posterior limb on the same side becomes much more sensible, but the posterior limb on the opposite side remains very sensible and sometimes it appears more sensible than in the normal state.

5th. If in performing the section of a lateral half of the spinal cord the instrument goes a little too far and divides also a small portion of the other half, then the posterior limb on the side of the complete section is less sensible than in the normal state, and the posterior limb of the opposite side, loses completely its sensibility.

6th. If the section of a lateral half of the spinal cord is made at the level of the second or third cervical vertebra, it is found that the sensibility becomes very quickly much greater in the parts of the body on the same side as the section, and on the contrary the parts on the other side becomes evidently less sensible.

7th. If after a section of a lateral half of the spinal cord at the level of the eleventh costal vertebra, another section is performed on the other side of that organ, at the level of the sixth costal vertebra, so that the two lateral halves are divided, then sensibility in most of the cases is lost, on both sides. Sometimes it retains a very slight degree of sensibility, more particularly in the posterior limb on the side where the spinal cord has been divided at the level of the sixth costal vertebra.

8th. If two sections of lateral halves are made as in the preceding experiment, but at a greater distance, one from the other, on the right side for instance at the level of the twelfth costal vertebra, and on the left side in the cervical region, nearly the same results are obtained as to the posterior limbs, but the sensibility is increased in the right anterior limb and it remains very evidently, but much diminished, in the left anterior limb.

9th. If a longitudinal section is made on the part of the spinal cord giving nerves to the posterior extremity, so as to divide that part into two lateral halves, then it is found that sensibility is completely lost in the two posterior limbs, although voluntary movements take place in them.

10th. If a similar separation of two lateral halves of the spi-

nal cord is made on the whole part supplying nerves to the anterior limbs, then it is found that sensibility is lost in both these limbs, and that it is only slightly diminished in the posterior limbs.

11th. If the same operation is done as in the preceding experiment, and afterwards if a transversal division is made on one of the lateral halves, in the place where it is separated from the other, then it is found that the posterior limb on the side of the transversal section remains sensible, and that the other posterior limb loses its sensibility.

These experiments prove very clearly that the sensitive nervous fibres are crossed in the spinal cord. The 9th, 10th, and 11th, demonstrate directly the crossing. In these experiments the crossed fibres are all cut, and sensibility is lost. This fact appears to prove that all the sensitive fibres cross each other; but it will be easily understood that on account of the loss of blood, and of the general diminution of sensibility produced by the excessive pain of the operation, if there are some fibres which remain without crossing, they are insufficient to give sensations.

As to the experiments consisting in transversal sections of a lateral half, they prove that sensibility is much diminished in the side of the body opposite to that of the section; consequently they prove also that there is a crossing of a great part of the sensitive fibres.

The fact that transmission of impressions made on one side of the body takes place, at least for a great part, in the opposite side of the spinal cord, is proved evidently by the eight first experiments, but much more by the 7th and the 8th experiments in which it is found that, after a section of a lateral half of the spinal cord, sensibility remains on the same side, and that it is nearly entirely lost after a second section of the other lateral half in another place.

If most of the nervous sensitive fibres are crossed in the spinal cord, then it is not exact to admit that the crossed paralysis of sensibility in cases of diseases of the brain, is explained by the crossing of fibres which exists in the pons varolii and in other parts of the encephalon. Many opinions have been proposed as regards the place where the sensitive nervous fibres make their crossing in the encephalon. According to some pa-

thologists, this crossing takes place all along the medulla oblongata, the pons Varolii, tubercula quadrigemina and the crura cerebri. In all these organs there is truly a crossing of fibres, but we do not know what are these fibres. Ch. Bell believes that the crossing of the sensitive fibres takes place in the posterior surface of the medulla oblongata, in a great part of the length of the fourth ventricle. Longet supposes that this crossing exists at the anterior border of the pons Varolii, where the two *processi cerebelli ad testes* cross each other.

My experiments prove that if there are some fibres coming from the trunk and from the limbs which do not effect their crossing in the spinal cord itself, their number ought to be very small. Therefore the fibres which are found crossed in the encephalon are not sensitive fibres coming from the limbs and from the trunk, as all physiologists have supposed they were.

My experiments were made on many different species; guinea-pigs, dogs, cats, sheep, and rabbits. In all the same results were obtained.

To ascertain the degree of sensibility, I used various modes of excitation; mechanical, galvanic, physical, (*i. e.* warmth and cold,) and chemical. I constantly compared the degrees of sensibility in the parts of the body situated behind the injured portion of the spinal cord, with the anterior parts of the body, and particularly with the face. It is thus that I have been able to ascertain the existence of an increase or of a diminution in sensibility.

Sometimes I have given chloroform to animals having had a lateral half of the spinal cord divided in the cervical region. I have found that complete loss of sensibility appeared at first in the parts of the body opposite to the section of the spinal cord, the head and neck, and at last in the parts of the body behind the section of the cord, on the same side. This experiment, as well as many others, prove undoubtedly that there is an increase of sensibility in these last parts. I will try in another article to explain this hyperæsthesia.

I believe I am entitled to conclude from the facts above related:

1st. That most of the impressions made on one side of the body are transmitted to the sensorium by the opposite side of

the spinal cord, so that the impressions on the left side of the body are transmitted by the right side of the spinal cord, and *vice versa.*

2d. That the assumed function of the crossing of fibres in the pons Varolii, and the neighboring parts, does not belong to these fibres, but to the fibres of the spinal cord, all along which they cross each other.

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## CLINICAL REPORTS.

*Pennsylvania College, Ninth below Locust street. Service of* Professor GILBERT.

Reported by W. H. GOBRECHT, M. D.

*Oct. 2d,* 1852.—CASE I. *Contraction of long flexor Tendon of Thumb, and operation.*—The case now brought before the Class, is one which had been contraction of the flexor tendons of all the fingers and thumb of the right hand. The patient, Lydia T——, aged 16, a healthy looking young girl, states that about three and a half years since the contractile affection was first perceived, without any previous injury.

About twenty months ago, one or two black spots were noticed just behind the knuckles of that hand, which were attended with burning pain, and in two or three days the skin, thus marked, sloughed out. Then other similar spots followed in the course of the arm, and in the position of all such spots cicatrices are now to be found.

This contraction of the tendons is unlike either torticollis or varus, in which the deformity depends upon rigid atrophy of the muscle; but on the contrary it is spastic, and arises from an abnormal condition of the upper portion of the spinal cord, probably from chronic inflammation of the investing membrane, and therefrom results a derangement of the nervous supply. In support of this view, we find that the patient has extreme tenderness of the spine in the interscapular and cervical regions. If this irritation could be obviated, then the contraction would be relieved;

but attempts at this relief have been made without any evident effect. The tendons of the fingers were cut a year since by an eminent surgeon of this city, followed by great relief. The thumb was also operated upon by cutting most probably the anterior tendon of the flexor brevis pollicis, with additional relief, and a digitated iron splint had been employed to retain the fingers and thumb extended. The thumb has since then resumed its old position and its deformity has increased, so that whilst the fingers are flexile and extensile, the point of the thumb has been gradually and so firmly buried in the palm of the hand that ulceration has been set up attended with great and increasing pain, and notwithstanding a well stuffed pillow has been placed beneath the offending organ to obviate the pressure, its benefit is so small that the patient had some four weeks since a violent spasm of long duration, evidently the result of said pressure. An operation is now demanded for the patient's relief. Firstly, on account of the spinal irritation; secondly, because the hand is rendered totally useless from the position of the thumb across its palm, so that amputation of the thumb has been advised by a practitioner who has previously examined the case. But the intention of Prof. Gilbert is to save to the patient, if possible, this most valuable portion of the prehensile member, and therefore, it is proposed to continue the general treatment addressed to the nervous centres, or establish new as may be required, and to obviate the local difficulty, by the division of the long flexor tendon of the thumb above the wrist.

The operation was then performed as follows: The patient being seated, a small incision was made on the ulnar side of, and parallel with the tendon of the flexor carpi radialis, just above the anterior annular ligament of the wrist. A dull tenotomy knife was then introduced, and the point passed beneath the tendon of the flex. carp. radialis and radial vessels, being then turned edge downwards pressure was made against the bone and towards the radial side of the fore arm.

The dulness of the knife obviated any injury which might accrue to the median nerve by a sharply cutting edge from which it could not recede as from a blunted one, should they chance to come in contact.

On the complete division of the tendon the thumb was in-

stantly relaxed. The wound was then closed by an adhesive strip, and the thumb and fingers fully extended by means of the iron splint before used.

On *Oct. 6th* the patient was again presented to the class. She could extend the thumb perfectly, and flex it slightly voluntarily, probably by means of the flexor ossis metacarpi pol, which still remains, and perhaps the flexor brevis pol.

The constitutional means now prescribed were—

℞. Extr. Conii ℈j, ft. pil. No. xij. S. One thrice daily and two at bed time. Also the following anti-spasmodic tonic.

℞. Pulv. Cinchonæ Rubr. ʒj.
" Rad. Valerianæ ʒj.
" Sem. Cardamomi ʒj.

M. ft. chart No. IV. S. To each powder add half a pint of boiling water. Dose, two tablespoonfuls thrice daily.

To these we add the local application of creasote by means of a brush to the side of the tender portions of the spinal column, as a counter-irritant. By these means we may hope to obviate much of the existing trouble.

The patient left town in ten days after the operation greatly improved in condition; the thumb and fingers extended upon the splint.

Case II. *Enlarged Tonsils.*—These are apt to follow *repeated* attacks of quinsy or cynanche tonsillaris. If the inflammation of the tonsil is acute, pus generally forms and is discharged, the gland returning to its original size; but after frequent attacks, the subsequent chronic inflammation produces enlargement and hardening, obstructing deglutition, impeding respiration, and changing the voice. In such cases, before an operation is determined upon, we should wait until the natural color and general appearance of the fauces have been restored.

A variety of instruments has been employed for the removal of enlarged tonsils. (Here the combined scissors and forceps and every variety of the guillotine plan of instrument were exhibited.) The case presented was one in which a plan of treatment differing from that ordinarily employed in this country had been recommended to the patient by her former attendant. It was proposed to remove the tonsil by the wire *ligature* applied by

means of the canula. In this method of operating the instrument be worn three or four days, and the patient subjected to the tedious and unpleasant process of sloughing. The fear of hæmorrhage appears to have originated this treatment, but this is not to be much regarded if the tonsil be excised on a line with the lateral palatine half arches, without drawing it into the fauces. This patient was instantly relieved of the major part of the right tonsil by means of Fahnestock's guillotine instrument with but very inconsiderable venous hæmorrhage.

Case III.—In presenting to the class an interesting case of *Polypus Nasi* with the operation, Prof. Gilbert made the following prefatory remarks:

Nasal polypi are tumors of one or both nasal cavities, which if allowed to remain, will increase and block up the affected nostril, and displace the septum narium, thus obstructing the other nostril, while the continued growth may produce deformity of the cheek, prevent the passage of the tears by pressing on the nasal duct, and perhaps cause even death by pressure on the brain.

Polypi may be divided into 1st, *The Soft*, which includes 1. The *Mucous* polypus, of which kind Dr. G. removed twenty four of small size from a patient at one sitting. 2. *Encysted*, which is a modification of the mucous.

2d. The *Hard*, which includes—1. The *Fibrous*, the base of which is broader and firmer than the mucous polypus, and arises probably from the periosteum. 2. *Fleshy*, or sarcomatous, containing a larger number of vessels. 3. *Malignant* or *Medullary*, which may be so per se, or by a degeneration of the fibrous variety.

The case of polypus before the class is supposed to be of the *Fibrous* description. The patient, J. P——, an Irishman, aged 36, a laborer, states that about six years since his nose became affected, and that ever since that timehe has experienced gradually increasing difficulty in breathing, up to about a year and a half back, since which time he has had no use of either nostril in the performance of respiration, except perhaps a very little on rising in the morning. Constant head-ache troubles him and

stillicidium lachrymarum is present. The nasal bones and nasal processes of the superior maxillaries are expanded, and the latter encroach on the orbit in such a manner as to evert both eyes, giving to the patient the appearance presented by a case of double divergent strabismus, as is shown in the accompanying cut from a daguerreotype by Laughlin.

It will here be seen that the lower part of the nasal bones form the upper part of the arch of the large tumor, which thus occupies the centre of the face, terminated above by the comparatively narrow bridge and below by the contracted apex of the nose.

The nostrils on examination are found filled with a resisting, soft, organized substance. Evidently large polypi.

In diagnosticating the variety of polypus with which we have to deal, we must act somewhat upon the method by exclusion, thus: The disease cannot be of a malignant nature, inasmuch as there is no cachexia. It has lasted for six years, with no inconvenience except its increase. There is no offensive discharge, and the polypi do not bleed. The affection must therefore be *benign*. The polypi are probably not of the mucous or encysted kind, in-

asmuch as there has been no extension into the pharynx, or far anteriorly, as is here usually the case. It is thus most probably of the fibrous character, and the tumors are no doubt firmly connected with the periosteum of the turbinated bones.

Preparations were therefore made for the performance of an operation on the most extensive scale. Bone nippers for enlarging the cavities were at hand, should it be deemed necessary, and an extractor, with a joint on the plan of the obstetric forceps, was constructed for the occasion, so that the blades might be introduced separately, and when the tumor or tumors had been grasped, the handles brought together and the ordinary torsion then effected. The means for plugging the nares were of course present.

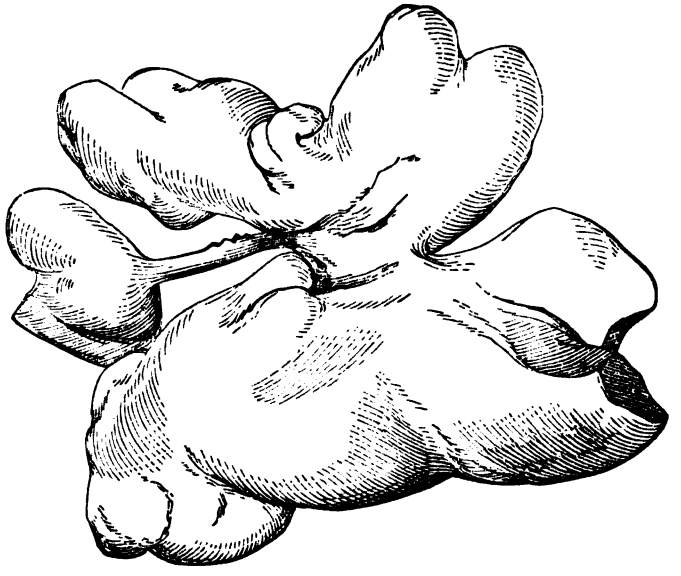
The patient having been seated, an incision was carried from the lower extremity of the nasal suture to the tip of the nose and down to the centre of the septum. A long, sharp-pointed bistoury was then introduced into the left nostril and made to emerge at the commencement of the first incision, then by a downward and forward cut, following the track of that incision, the nostril of the same side was laid open. The right was treated in a corresponding manner. Large polypous masses were thus exposed, and the prepared forceps were introduced into the right cavity. After the breaking up of a few smaller masses and several ineffectual attempts at the larger one, a double lobulated tumor with a central plate of bone was with some difficulty withdrawn.

This mass is figured of life size. [*See next page.*]

It presented very much the shape and size of two large oysters connected firmly together, containing various large and small sacs which discharged a greater or smaller amount of flaky, whitish pus.

One or two smaller polypi were now extracted and, several small plates of bone came away attached to their bases.

On now examining the left nasal cavity an encysted polypus was broken up, out of which gushed about two drachms of pus, and then one or two smaller polypi were extracted; on examination with the finger it was found that the lower part of the vomer had been pushed so far into this cavity that it was almost completely occluded, so that but few polypi here existed, this nostril being in great part only secondarily obstructed.



The right posterior naris was then plugged by the following simple and ingenious method:—ordinary bonnet wire of about 30 inches in length (such as is used by milliners to stiffen the bows of bonnets, and which can therefore be obtained at a moment's notice, when the more beautiful but less easily transportable canula of Belloc is not at hand) was doubled upon itself, passed into the anterior nares, and on appearing posteriorly it was seized by the forceps and drawn forward; the plug of sponge was then introduced within the loop of the double extremity and the wire twisted upon itself in such a manner as to firmly secure the tampon, which was then,—first having attached a cord to it by which it might, if necessary, be withdrawn by the mouth,—brought up against and into the posterior naris which it firmly closed; another sponge, in ordinary cases, is then placed against the anterior naris, and the free ends of the wire knotted strongly upon it, when the cavity is effectually deprived of any external communication; but here, in consequence of the anterior incisions, no such pressure could be employed, and consequently adhesive straps had to be relied on. The left posterior naris did not require to be plugged.

The edges of the wound were now brought together by means of four fine gold needles and the twisted suture. The three upper needles did not penetrate the cartilaginous septum, but only the contiguous edges of the flaps, relying upon the elasticity of the integument for the requisite pressure upon it. The lowest needle was made to pass beneath the point of the nose through the right flap and the septum. All these pins were removed on the following Tuesday, Oct. 5th. On Saturday, Oct. 9th, the threads which surrounded them came away, and complete union of the soft parts by the first intention was found to exist. Breathing through the right nostril is perfect, but not quite so free in the left, and this is to be accounted for, it will be remembered, by the existence of the bony obstruction, and, perhaps, some concealed polypi.

*October 6th.*—CASE IV. *Cellulo-Cutaneous*, or *Phlegmonous Erysipelas.*—Erysipelas is a diffused inflammation of the skin, or skin and areolar tissue, with a tendency to spread. It is of several kinds; but of the form under consideration we shall merely state, that it extends from the integument down to the subjacent areolar tissue, and thence communicates itself to the muscular and tendonous investments. Abscess may then form and extend itself; depression of the vital powers ensues; sloughing of the tissues with a discharge of ichor and thin sanious pus, and frequently death may result.

In the case presented, an adult male, who appeared for treatment upon Wednesday last, and was seen by many of you at that time, the back of the right hand was immensely swollen, tense and red, as were also the parts about the metacarpo-phalangeal articulation of the thumb. This redness and swelling had extended up the arm, and seemed disposed to spread. *Creasote* (pure) was applied over the entire inflamed surface, by means of the camel's hair pencil, and a poultice ordered, inasmuch as an abscess seemed almost inevitable. Upon the third day—namely, October 2d, he re-appeared, and the irritation and swelling, by the counter-irritant action of the creasote, had greatly diminished. The creasote was then re-applied, and the poultice continued. To-day, Oct. 6th, we find nearly all the pain and redness gone; the swelling greatly diminished, as

shown by the wrinkling of the skin, and all fears of an abscess have vanished. We now re-apply the creasote which has at no time given him very great pain, expecting to find him, at his next visit, perfectly relieved, having only, perhaps, some remaining stiffness of the joints.

The case in point demonstrates most satisfactorily the value of pure creasote, as a local application, in the treatment of erysipelas.

Case V. *Exomphalos, or Umbilical Hernia.*—This may be either *congenital* or *non-congenital.* In the former, the intestine or omentum is protruded into the umbilical cord; it is to be recognized by the abnormal enlargement of this structure, the extruded substance forming a conical tumor within it, near to the umbilicus, and for this occurrence we must be constantly on our guard. In the non-congenital, occurring generally in the infant, as in the present case, the tumor forms gradually from some such cause as has here operated. These herniæ may be either reducible or irreducible, but are seldom strangulated.

Francis M'C——, aged 11 months, was now presented, with the following history drawn from the statement of the mother. A tumor appeared at the umbilicus at about six months after birth, which seems to have arisen from muscular exertion, since the child was in the habit of implanting his heels firmly against any resisting body, as the knees of his nurse, and throwing his head and shoulders strongly back, and thus, by extending the spine, projecting the abdomen; the resistance of its muscular walls then acting forcibly on the contained viscera, a part were extruded gradually at the weakest dilatable point. By pressing upon the tumor it is easily reduced, and must be retained by means of a small semi-globular mass of wood, wrapped with narrow bandage, to increase its bulk and render it soft and equable in its pressure; this is placed over the weakened point in the abdomen, and retained by a circular bandage thrown about the body of the infant. This pad must be worn for some nine or twelve months, until the growth of the surrounding tissues has obliterated the abnormal opening.

Case VI. George W——, aged 12, had both tonsils removed by means of Fahnestock's instrument.

Case VII. *Cataract.*—Prof. Gilbert remarked that cataract

may be either idiopathic or traumatic, and then proceeded to describe its varieties, together with the immediate causes of the disease and its effects. The different methods of operation for its relief were then detailed, illustrated by a variety of large diagrams. In the case presented, which was of the *soft* variety, of the left eye, occurring in an adult German, male, aged about 40, Prof. Gilbert preferred the form of operation known as Keratonyxis, in which the needle is introduced through some part of the cornea, and made to reach the obstructing lens through the anterior chamber of the eye. This method is perhaps best employed in first operations, where absorption is desired. We may thus effectually lacerate the capsule, the whole of the needle being visible during the entire operation, and all danger of wounding the ciliary body avoided.

The pupil was previously well dilated by means of a few drops of a solution of Atropia, gr. i. to f.ʒiv aq. destil., placed on the conjunctiva some 15 minutes before the time of operating. The instrument employed was the plain sewing needle No. 10, held in a porte-aiguille, and introduced about an eighth of an inch from the sclerotic margin, into the cornea, and passed to its destination as before directed. The lens was effectually broken up and partly discharged into the aqueous chambers.

October 20th. The solution of the lens is reported as progressing favorably. The needle may require another introduction after several weeks have elapsed.

*October 9th.* Case VIII.—*Obstruction of the Nasal Duct with Chronic Inflammation of the Lachrymal Sac of the right side.*—Mary W——, married, aged about 35, has been troubled with this affection for now nearly six years. It commenced with weakness of the eye, which was constantly watering; not from a morbid secretion of tears, but from their inability to pass into the nose which was dry; a small tumor then appeared at the inner canthus, and a slight, muco-purulent discharge, which she was first enabled to pass down into the nostril by pressure on the distended lachrymal sac constituting the tumor, now made its appearance in the eye, by regurgitation through the canaliculi. Intercurrent inflammations of the nose and eye were also frequently set up, and the cheek became excoriated by the irritation of the stillicidium lachrymarum.

The sac had been once opened for her relief, but it had closed again, the obstruction returning, to have which removed she has now applied to us.

This condition of things, then, most probably, in the first instance arose from chronic inflammation of the mucous membrane of the lachrymal duct, which resulted in its thickening from the effusion of lymph, between it and its bony walls. Now since the expansion of these is impracticable, the new matter deposited only served to approximate more nearly the internal surface of the membranous parietes of the duct, until, eventually, total occlusion of the passage followed. The natural flow of the tears being thus gradually prevented, acute inflammation of the sac resulted from the stagnation of its distending saline liquors, increased secretion of mucus, and then a pus formation eventuated, and this regurgitating muco-purulence is kept up by subsequent chronic inflammation.

The intercurrent inflammation of the nose resulted from its unaccustomed dryness, or by continuous sympathy—that of the eye from the irritant pus or also by continuous sympathy,—and the excoriation of the cheek was caused by the constant stillicidium lachrymarum as before stated.

The same general cause of symptoms doubtless resulted, upon the closure of the sac after the first operation for its relief.

There is now a daily danger, from the condition of the sac, of a return of acute inflammation, when fistula may result by ulceration from internal pressure on the walls of the distended and occluded cavity. To obviate this, we shall endeavor to re-establish the communication between the eye and nose by the proper operation. This was then performed in the ordinary way. The patient being seated, the tendo-oculi was made tense, the point of the bistoury passed into the sac, and being then directed downwards, outwards, and a little backwards, was made to enter the nose through the duct; a probe was then introduced just before, and whilst the bistoury was withdrawn to render its clearance certain. A wax bougie was passed into the duct immediately upon the withdrawal of the probe; this is to be allowed to remain for several days until the irritation of the parts has subsided, when the style will be substituted. An adhesive strap retains the bougie in its proper position.

On October 16th the case was brought before the class for the second time, and as the irritation resulting upon the operation had totally subsided, the silver nail-headed style was introduced; by it the tears will be enabled at first to reach the nostril, by the capillary attraction exerted in the linear space between the style and the duct walls, and afterwards by the larger space produced by the absorption of the effused lymph, by the pressure upon the membrane thus exerted after the manner of the treatment of any stricture.

A cure may result in from three to six or nine months according as the case may be amenable to treatment. The style must be removed occasionally, cleansed and returned.

A case of *Large Tumor of the superior maxillary bone* of the right side, in a female was then exhibited and some history of it given. The patient will be operated upon on 23d inst.

*October 13th.* Cases IX. X. and XI.—Two cases of *amputation of parts of the hand*, from injuries received by circular saws, were exhibited, their histories related, and the effect of the proper treatment, with the progress of the cases, brought to notice, and this great principle of action in these cases enforced, viz: *the necessity of saving all that we can.* Cold water dressings were first employed, followed by cerate and the occasional use of argent. nit., to repress fungous granulations.

Contrasting with these, a case of *amputation of all the toes of both feet*,—which was performed in consequence of the sloughing of the majority of these organs from frost-bite, where the already impaired capillary vessels were further impaired by the supervention of typhus fever,—was next exhibited. Here it was distinctly shown that where the *majority* of the *toes* are to be removed from whatever cause, *all should be taken away*, in order that the base of the column of support may be firm and unwavering. The same treatment was here pursued as in the former cases. The anæsthetic mixture of ether 2 parts, chloroform 1 part, was employed in each of the three cases.

Case XII. In a female aged about 50, a tumor of the size of a hazel-nut, most probably of a commencing malignant

character, situated on the inside of the left cheek, was removed with a tenaculum and scapel.

CASE XIII.—A small *fibrous sub-integumental tumor*, just below the inner canthus of the left eye, (in an adult, Patrick M'G——,) of about the same size as the preceding, was removed with the scalpel by two elliptical incisions—the edges of the wound being approximated by two fine gold needles and the twisted suture. Some ectropion was produced by this proceeding, which it was supposed would be obviated by the stretching of the extensible integument.

16*th*. On presenting the case to-day, as the lips of the wound were found firmly adherent, the sutures were removed. The slightest possible shade only of eversion was perceptible—the lid will doubtless resume its proper position without delay. On the 20th, perfect union had ensued, and the lid was still improving.

CASE XIV.—*An encysted tumor* was removed from the back of the neck of an adult male aged about 40, by a longitudinal incision, two inches in length, immediately over it. The contents of the cyst, of a cheesy character, were discharged, the sac dissected out, and the wound closed by several adhesive strips.

*October* 16*th*. CASE XV.—*Enlarged tonsils* were removed. from a child aged five years. Prof. Gilbert has performed the necessary operation on a child aged only three and a half years.

CASE XVI.— *The mid-finger of the right hand was removed* with the phalangeal extremity of the metacarpal bone as a remedy for obstinate flexion, rigidity and partial dislocation, from contraction and adhesion of the concerned tendons, the result of abscess. It was done at the request of the patient, a woman engaged in a laborious pursuit, who was incapacitated for her business by its persistence.

On the 20th it was dressed before the class, but the adhesive strips with which the wound was closed were untouched. There had been a little oozing of blood and the nervous symptoms resulting from the operation had demanded a decided anodyne.

Cases XVII. XVIII. XIX.—*Three cases of morbus coxarius*, each presenting one of the three different stages of this affection, were now presented, with appropriate remarks on the disease and its mode of treatment. The paramount indication in these cases was stated to be *quiescence of the joint.* For this purpose Dr. Physick recommended a carved splint. In these cases, in the first and second stages, splints made of binder's board, softened by moistening, and then accurately adapted, from the eighth rib to the knee of the affected side, were provided. These must be worn for a period of nine months at least, probably in the worst case for twelve or fifteen months. For the emaciation in the case in its second stage, the cod liver oil in desert spoonful doses was prescribed.

*October 20th.* Case XX.—*Tumor of the metacarpal bone* of the little finger, was presented as occurring in a boy of twelve years a pupil of Girard College, following upon fracture of the bone, angular union and a consequent exostosis on the palmar aspect.

Case XXI.—*False anchylosis of the elbow* of a child, aged five years, Francis F——, resulting upon a scrofulous abscess about the joint, was exhibited, and the treatment detailed, both general and local.

Case XXII.—A case of *Hernia Infantilis*, non-congenital, but occurring at the sixth month, in a child aged two years, was shown, the nature of the disease explained, and a truss applied.

Previous cases were also shown and dressed—as was also some on every preceding Clinical day.

## BIBLIOGRAPHICAL NOTICES.

*On Syphilis, Constitutional and Hereditary; and on Syphilitic Eruptions.* By ERASMUS WILSON, F. R. S., Author of "A Treatise on Diseases of the Skin," etc. *With Four Colored Plates.* Philadelphia: Blanchard and Lea, 1852. 8vo. pp. 284.

This book has considerable pretensions on the score of originality, the author having, he states, "confined himself strictly to his own experience, and limited his remarks to observations made with his own eye." His work appears "as an arranged series of cases, representing the subjects of his inquiry, and the sources of his conclusions." He particularly claims to have placed the subject of syphilitic eruptions "upon a more correct basis than that on which they had previously stood," and attempts to establish that there exists in fact "but one *eruption*, and that the apparent differences in the character of the cutaneous affection [of syphilis] are the simple consequence of modification of development of that eruption, a modification depending for the most part, on time, treatment, and the temperament of the patient."

Dr. Wilson's views on the general subject of syphilis appear to us in the main sound and judicious, and we commend the book as an excellent monograph on the subject. But, while we are prepared to go very far with him, in estimating the consequences of the syphilitic contamination upon the human system, we cannot but consider that he has much overcharged the picture of its effects, and has been led into great exaggerations. It is certainly going far to assert, "that the tenacity of the syphilitic poison to the human organization cannot but lead to the conclusion that, once admitted into the blood and tissues of the body, it remains there for life. It may not manifest its presence by any outward sign, but this cannot be received as an argument against its existence; . . . . . and should the individual escape, his children may suffer sooner or later; and I am firmly of opinion, that the powers of the poison may be manifested after the lapse of several generations." And, again, "the poison of syphilis is of a most enduring kind; once received into the blood, it remains there for years, and possibly—indeed certainly—for the rest of existence." "A person possessed of this poison is capable of

conveying it to another; and if that other be his wife, he may, through her means, convey it also to his child." "The infected wife must remain infected as long as she continues to live; and, by a parallel reasoning, the infected child must remain infected until death!" There is something really appalling in these doctrines, involving, as they almost do, the final *syphilisation* of the whole human race. And, indeed, they are apparently contradicted by the author himself, who, in his chapter on treatment, certainly implies his frequent successful elimination of the syphilitic virus from the human system.

He traces, also, to "that widely spread, that almost universal, animal poison, syphilis," various disorders not usually connected with it. "Lupus, Kelis, and Lepra and Psoriasis are forms of cutaneous disease, all having their original source in syphilis, all maintaining a relationship in different degrees of remoteness with that disease, and all, therefore, falling into the category of hereditary syphilis." And scrofula, too, is assumed to owe its orign to the syphilitic poison." "Is NOT LUPUS, SYPHILIS?" Dr. Wilson asks. "Lupus is scrofula; and what, we might ask, is scrofula? Is SCROFULA, SYPHILIS?" And, in another place: "A considerable portion of those diseases, which pass under the name of Scrofula, are the produce of the syphilitic poison—are, in fact, not scrofulous, but syphilitic." In short, we rise from the book, almost with a doubt if every thing morbid is not syphilis, and all mankind doomed to the inevitable contamination.

Notwithstanding, however, this disposition to overstrain his subject, Dr. Wilson has presented us a very faithful and lucid description of syphilis, and has cleared up many obscure points in connection with its transmissibility, pathology, and sequelæ. His facts and inferences will, we are satisfied, be received as decisive in regard to many *questiones vexatæ*. They appear to us entitled to notice at some length.

First, with respect to the *transmission* of the syphilitic poison. Dr. Wilson thinks that it may be communicated by the natural secretions of a person who has been contaminated, though, "to all appearance cured of the consequent diseases,"—"without the presence of a primary disease in the infector, or the intervention of a primary disease in the infectee." Numerous cases —many very strong ones—are detailed in apparent confirma-

tion of this view. As far as regards the transmissibility of actually existing constitutional syphilis, our opinions are in accordance with the author's. And we believe him also to be right in the subjoined speculation:—

"The recognition of the contagion of constitutional syphilis, will go far to explain a circumstance which must have fallen under the observation of every unprejudiced investigator of the syphilitic poison and its manifestations, namely, the occurrence of syphilitic eruptions and other symptoms of constitutional syphilis after gonorrhœa. When we see a man perfectly free from any primary symptoms of disease, communicating syphilis to his newly-married wife, by his secretions alone, can we doubt the possibility of a similar result accruing from a syphilitic secretion poured out by the mucous membrane, as happens in gonorrhœa? I do not say that every gonorrhœa is syphilitic; on the contrary, I know that few are so, but those few have as much the power of transmitting syphilis as an undoubted chancre. I am led to make this observation, because, in numerous instances of syphilitic eruptions which have come under my notice, I have been told that the patient has never suffered from any other form of venereal disease than gonorrhœa, and this has been used as an argument against the possibility of a resulting constitutional syphilis. It is an argument which should be received with distrust."

In connection with primary syphilis, we may note the author's opinion, that sloughing and phagedænic chancres are rarely followed by constitutional symptoms, "the excessive local action which occurs in them seeming to destroy the virus-forming process which would have otherwise have been set up. The calm and natural action present in the simple chancre, being favorable to development of the virus, renders it more dangerous as a source of constitutional infection." The indurated chancre "is invariably followed by constitutional syphilis; indeed is itself a manifestation of constitutional action; in other words, the induration is a constitutional affection superadded to the primary disease."

The syphilitic poison, if introduced into the blood, excites in that fluid an action "which results in the ejection or elimination of the poison."

"The symptoms which may be selected as pathognomonic of syphilitic fever are: mental and nervous depression and prostration; congested fauces, with sore-throat; congested and muddy conjunctiva; congested and discolored skin, the congestion being partial or general, and assuming the form of an eruption; and, added to these, neuralgic pains."

In this combination of symptoms the author sees a resemblance to the fevers usually termed exanthematous, . . . . the syphilitic fever being considered a *chronic* exanthema, while the others are *acute*.

In the effort on the part nature to eject the noxious poison from the blood, the superficial membranes chiefly suffer.

"The syphilodermata, or syphilitic eruptions of the skin, present two principal forms, the one being simply congestive and unattended with elevation of the skin; the other, presenting the obvious feature of elevation. To the *non-elevated* group belong roseola, syphilitic maculæ, and erythema; to the *elevated* group, the small pimples of lichen and the larger pimples or tubercles of tubercular syphilis. These differences are, however, more apparent than real, and may be regarded as stages of development of the same disease. Roseola, by an easy gradation, is converted into lichen, or tubercular syphilis, and these latter, by simple subsidence, become syphilitic maculæ.

The period, at which the roseolous rash makes its appearance, is between six and nine days after the development of the primary disease. The lichenous eruption occurs with more irregularity as to the period of outbreak,—usually in delicate subjects or under circumstances of exposure. "The tubercular eruption differs from lichen only in the size of the little elevations which give it its specific characters."

As regards the "copper color" of syphilitic eruptions, according to Dr. Wilson,

"The copper color represents in fact, a declining stage of the eruption, when the congestion is subsiding, and the yellow stain of the altered fluids of the skin shines through the purple of the blood. The 'copper color,' therefore, may have a greater or less amount of red or yellow in its composition, and be either a reddish copper color or a yellowish copper color.

As the copper color represents only a stage of the eruption, that eruption having probably passed through the tints of dull-red, and dull purplish-red, before it reaches the reddish-yellow brown of copper color, it is clear that the term is objectionable when taken as a pathognomonic sign of a syphilitic eruption. For, if we see the eruption at any other period than that of its decline, the characteristic tint is absent."

Numerous varieties are described of tuberculous syphilis.

As regards vesicular syphilis, the author has "never seen a case of constitutional syphilis deserving of a place under this

head." Indeed, he can hardly conceive the eruption of syphilis to assume the character of eczema or herpes.

"The only eruption coming strictly under the denomination of *pustular* syphilis, is rupia. . . . Other forms of pustule must be considered as instances of suppurating papules and tubercles."

Rupia forms "a natural link of transition from the superficial ulcerations of syphilitic tubercles, to those deep, unhealthy, and often sloughing ulcers, which may be distinguished, *par excellence*, as syphilitic ulcers."

Syphilitic tumors, (*tubercula gummata*,) Dr. Wilson considers to result from the modification of syphilis by time.

"They seem to deserve a place by themselves under the title of 'chronic syphilis;' or, if it be preferred, tertiary syphilis. In their hardness they remind us of cancer, and are very likely to be mistaken for that disease. When they ulcerate, ulceration takes place very slowly, and generally on one side, while by the other they continue to grow; hence the ulcer has more or less of a horse-shoe form, and the tissues over which it has passed heal, but leave an indelible cicatrix. The ulcer is slowly destructive, and exhibits no tendency to granulate; sometimes it dissects out certain tissues with great neatness."

Besides these general effects of the syphilitic poison on the skin, the author describes many others, which are local or partial; "such actions being either present as symptoms among the general phenomena, or having an independent existence." They are alopecia and other affections of the hair, affections of the nails, affections of the hands and feet, (termed by him erythema palmare et plantare, though "generally going by a name to which they are by no means entitled, psoriasis,") condyloma, affections of the mucous membranes, affections of the tongue, affections of the nervous system, and, lastly, of the periosteum, ("much more rare at the present day than in times past.") On the subject of these "local action of syphilis," the author keeps very much the old track, and we notice little that claims special attention.

The views entertained by Dr. Wilson on *congenital* and *hereditary* syphilis, we have already adverted to as extreme. That "the transmission of the poison of syphilis from parent to offspring is a fact so well established that no argument can be ne-

cessary to give weight to its truth"—we entirely admit. But the assertion, "that the syphilitic poison once received into the blood remains for life,"—after its pathognomonic symptoms are apparently cured—and that it is transmitted hereditarily from generation to generation, we cannot but characterize as an opinion unsustained by facts, and fraught with ill tendencies.

On the subject of treatment, Dr. Wilson's views appear to us to comprise a thoroughly rational and judicious scheme. The *abortive treatment* he of course lays down as the only alternative, as soon as possible after the development of a suspicious pimple or sore upon the organs of generation. In the selection of a caustic application, he gives the preference to potassa, or potassa cum calce, (Vienna paste.) Nitrate of silver, or nitric acid, he considers perfectly useless; "the morbid tissues are not confined to the actual surface, they extend probably to the depth of a line, and the nitrate of silver affects the surface only."

With respect to the constitutional treatment of primary syphilis, Dr. Wilson very reasonably holds, that, if the abortive treatment have been effectually carried out, so soon as the effects of contagion become evident on the organs of generation, there is no longer any poison, and no necessity for internal treatment. As it rarely happens, however, that the surgeon is called upon to treat a venereal sore, until it is several days old, there is more or less chance that the poison has infected the blood, and proper means must be taken to expel it from the system. Mercury is the chief agent to accomplish this, "the great antidote of syphilis," "and for the simple reason," according to Dr. Wilson, "that mercury alone possesses the power of acting upon all the emunctories of the body." Probably, also, it exercises a direct antagonistic or antidotical action upon the poison in the blood.

The author does not urge a mercurial course to the point of salivation; he would, however, keep up a gentle mercurial action for some days after the healing of the ordinary primary sore. In the case of the indurated sore, it must be continued as long as any induration remains; the indurated sore being "a local disease, plus a constitutional disease, a secondary action superadded to a primary disease." To the inflammatory and phagedænic sores, mercury is inapplicable; they must

be treated according to the common principles of surgical medicine.

The constitutional treatment of common primary sores may be considered rather as preventive of absorption than as curative. "In constitutional syphilis, however, we have no longer to deal with a possibility of absorption of the poison; the poison is in the blood, and our treatment must be directed to its removal." A mercurial treatment is here indispensable, though dietetic and medicinal adjuvants are not to be lost sight of. Dr. Wilson usually selects the biniodide of mercury in the treatment of constitutional syphilis, giving blue pill, however, the preference in the primary form. He bears testimony to the value of sarsaparilla as a remedy well suited to act on the depurating organs.

A single attack of secondary symptoms does not exhaust the manifestation of the presence of the syphilitic poison in the blood. But "as the attacks of constitutional syphilis become further removed from the original contagion, that is, as the poison becomes more and more assimilated, mercury seems to lose its influence." In a second attack, the biniodide of mercury may retain its power; in the third, the bichloride is prescribed; but in the fourth and successive attacks, the iodide of potassium. In the *chronic* or "tertiary" forms, "mercury is not only inadequate to the removal and cure of the disease, but is actually injurious; it is at this period that iodide of potassium takes the lead as an anti-syphilitic remedy." The nervous complications, syphilitic neuralgia and rheumatism, "yield rapidly and completely" to this medicine; and for affections of a still later period, involving deeper structures of the body, as the fibrous tissue of the penis, the periosteum and bones, it is emphatically the resource. The iodic remedies are not, however, to be pushed after they irritate the system.

We pass over the author's local treatment of the syphilodermata. In congenital syphilis, he considers "the safest practice to be to give mercury to the mother as well as the infant; taking care to moderate the dose to such a degree as not to check or injure the secretion of milk."

On the subject of hereditary syphilis, his views of treatment are in consonance with his pathological doctrines.

"After the age of infancy, congenital syphilis gradually merges into what may be termed hereditary syphilis. The infantile syphilis gets well, but several months or a year afterwards, it breaks out again. Sometimes, however, the patient has been free from any indications of syphilis in his infantile age, the first manifestations of its presence in the system being delayed to the period of advanced childhood, puberty, or adult life. This more properly constitutes hereditary syphilis.

The kind of syphilitic disease now under consideration, in its more recent forms yields without much difficulty to the bichloride of mercury; when more advanced, the iodide of potassium is a useful auxiliary; and in a more distant remove, the combinations of iodine, mercury, arsenic, and cod-liver oil, become valuable remedies."

For the Esthiomenous affections of the skin, which Dr. Wilson attempts to trace "to the syphilitic poison in a distant remove from its original source,"—"a class of diseases essentially refractory,"—he claims the discovery of a correct principle of treatment; "the treatment by alterative doses of mercury." In his hands,

"This treatment has been most encouraging and most successful. They have yielded before the antisyphilitic treatment, as if 'syphilis' were stamped upon them in printed characters; and they certainly belong to that category of diseases which, treated by syphilitic remedies, are to be relieved and cured; but which treated in any other way are not only incurable but often destructive of life."

We have perhaps been somewhat prodigal of space in our abstract of this book. But it is certainly a very good resumé of received opinions on syphilis, and presents many original and striking views on the subject.

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*Transactions of the Twenty-Ninth Annual Meeting of the Medical Society of Virginia, together with the President's Annual Address and the Constitution of the Society.* Richmond, 1852.

The Transactions of the Medical Society of Virginia, which met at Richmond, in April last, appear to have been of considerable interest. The subject of medical education, and, in particular, the establishment by law of a State Board of Medical Examiners, occupied much of the attention of the Society, and elicited animated discussion. It would seem that the Society leaned so far to the interest of the Schools, as to refuse to recommend to the

Legislature the *unqualified* establishment of a State Board of Examiners, but suggested "the propriety of requiring as a condition precedent to every examination, that the applicant shall have been graduated in medicine, or shall have attended two full courses of lectures in some respectable medical College." Drs. Tucker, Atkinson, Haskins, Worsham and others took part in the debate on this question.

The Address of the distinguished President of the Society, Dr. Beverley R. Wellford, of Fredericksburg, is a very forcible argument in favor of reform in our system of medical education. Dr. Wellford has been one of the pioneers in this cause, and we are gratified to find him still lending his high name and earnest eloquence to its advancement.

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*The History, Diagnosis, and Treatment of the Fevers of the United States.* By ELISHA BARTLETT, M. D., Professor of Materia Medica and Medical Jurisprudence in the College of Physicians and Surgeons of the University of the State of New York; member of the American Academy of Arts and Sciences; Author of an Essay on the Philosophy of Medical Science, &c. &c. Third edition, revised. Philadelphia; Blanchard and Lea. 1852.

*Clinical Reports on Continued Fever, based on Analyses of one hundred and sixty-four cases; with remarks on the Management of Continued Fever; the identity of Typhus and Typhoid Fever; Relapsing Fever; Diagnosis, &c. To which is added a Memoir on the Transportation and Diffusion by Contagion, of Typhoid Fever, as exemplified in the occurrence of the disease at North Boston, Erie Co., N. Y.* By AUSTIN FLINT, M. D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine, in the University of Buffalo, and Editor of the Buffalo Medical Journal. Buffalo: Geo. H. Derby & Co. New York: Geo. P. Putnam, 10 Park Place. Chicago: D. B. Cooke & Co. 1852.

This third edition of Dr. Bartlett's excellent treatise on the fevers of the U. States brings the subject down to our own time. Commencing with typhoid fever, the perpetual continued fever

of the United States and of most temperate climates, he enters fully into its symptoms and mode of treatment. The symptoms of typhoid fever have been as well studied as those of any other disease, and are well detailed by Dr. Bartlett, and indeed have been so carefully described by Dr. Louis, that subsequent writers have had comparatively little to do but to repeat his graphic delineations of the disease. The method of treating it the author gives in extenso, including under separate heads the modes pursued by the different physicians who have written special treatises upon the disease.

Typhus fever is also described at large and is admitted by the author to be a disease different in character from typhoid fever, the absence of the characteristic lesions of the latter disease as well as the difference in symptoms establishing the diagnosis between them. The two diseases at times, however, approach each other very nearly and are closely allied; perhaps they are sometimes found united, that is, the same patient on some rare occasions has some of the symptoms of typhus and some of those of typhoid fever.

Dr. Bartlett next proceeds to the subject of periodical fevers, including intermittent, remittent, and congestive fevers; these are well described and the modes of treating them accurately pointed out. He finishes his work with yellow fever, which of course he is not able to delineate from his own observation, but he has given a very good analysis of the symptoms drawn from the histories of the disease published by different observers.

The reports by Dr. Flint of Buffalo include many points of interest to be added to the history of these diseases. It is of course a less perfect treatise than that of Dr. Bartlett, but contains many useful facts produced from his own experience. It forms an interesting volume for those who are engaged in studying these diseases, although not affording a complete history of them. Amongst the series of detached essays it contains, is one on the contagion of a set of cases of typhoid fever, which he considers to be very clearly shown. In our own experience, we have never seen any facts of the same character, but they have been so often stated by different observers, that we have no doubt that the disease may be sometimes, although very rarely, contagious.

*Curiosities of the Microscope, or illustrations of the minute parts of creation, adapted to the capacity of the young, with colored illustrations.* By Rev. J. A. WYTHES, M. D. Philadelphia: Lindsay & Blakiston.

This is a neat little volume, very prettily gotten up, and containing much to interest those for whom it is intended. It scarcely comes within the range of a medical journal, however, though it presents much to attract those to whom it is addressed.

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# THE MEDICAL EXAMINER.

## PHILADELPHIA, NOVEMBER, 1852.

### THE MEDICAL SCHOOL OF PHILADELPHIA.

It gives us great pleasure to state that an unusually large class of students is in attendance at the various institutions, which compose the great medical school of Philadelphia. The benches of the University, and of the Jefferson College, are both crowded to overflowing, and a very marked and decided increase is noticeable in the numbers at the Pennsylvania Medical College.

In connection with the University, the point of chief interest during the present session has been the début of the new Professor of Chemistry, Dr. ROBERT E. ROGERS, who fills the chair vacated by the death of his lamented brother, Dr. JAMES B. ROGERS. Dr. Rogers has proved a most impressive lecturer and effective teacher, and has well maintained the high reputation which accompanied him from the University of Virginia. His course elicits unqualified satisfaction from the class, and his appointment cannot fail notably to promote the interests of our Alma Mater.

The present session at the Jefferson College bids fair, we believe, at least to equal in success the brilliant career of the last and previous years. Nothing occurs to vary the unbroken unity which the able and judicious faculty have so long maintained.

That the Pennsylvania College must evince a striking impetus from the infusion of strength in its reorganization last summer, we confidently

predicted; and our anticipations have been fully realized, both in the distinguished success which has attended the efforts of the new professors, and in the large accession of students to the institution.

The clinical and various private courses are, we believe, unusually well attended; and in all the minor branches of the great business of medical instruction an encouraging success is witnessable. We may say, with the most entire truth, that Philadelphia this year fully maintains her ancient supremacy as the metropolis of American medicine. B.

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### THE MEDICAL SCHOOL OF LONDON.

Perhaps some notice of the various medical schools of the great metropolis of the world may be of interest to our readers. London, it is not to be disguised, has within a few years been absorbing much of the attention which so long centered about Paris, as at a still earlier period at Edinburgh. Of the great names of medicine, a large proportion is now to be found at London, and some details as to their local connections we think must prove attractive.

It is to be noticed, that the "EXAMINING BOARDS" in London are distinct from the schools. This desirable separation is one of the improvements so ardently urged by many advocates of medical reform among us, and a glance at the standard of "examinations," herewith subjoined, must certainly satisfy every candid inquirer, that a higher scale of requirements for a degree in medicine obtains under this system than our own.

The examining bodies in London are, the UNIVERSITY OF LONDON, the ROYAL COLLEGE OF PHYSICIANS, and the ROYAL COLLEGE OF SURGEONS. We give at length the list of Examiners and the regulations of these institutions.

First, the University of London, where in the Board of Examiners many celebrated names will be recognized:—

#### UNIVERSITY OF LONDON.

*Somerset House.*

*Examiners.*

*Faculty of Medicine.*—Intellectual Philosophy, Logic, and Moral Philosophy: Rev. Henry Alford, B. D., T. B. Burcham, Esq., M. A.

Medicine: Archibald Billing, M. A., M. D., F. R. S., Alexander Tweedie, M. D., F. R. S.

Surgery: Sir Stephen L. Hammick, Bart., Joseph Hodgson, Esq., F. R. S.

Anatomy and Physiology: Francis Kiernan, Esq., F. R. S., William Sharpey, M. D., F. R. S.

Physiology and Comparative Anatomy: W. B. Carpenter, M. D., F. R. S.

Midwifery: Edward Rigby, M. D.

Chemistry: W. Thomas Brande, Esq., F. R. S.

Botany: Rev. J. S. Henslow, M. A.

Materia Medica and Pharmacy: Jonathan Pereira, M. D., F. R. S.

*Examinations for the Degree of Bachelor of Medicine.*

Candidates for the degree of Bachelor of Medicine are required—1. To have been engaged during four years in their professional studies at one or more of the institutions or schools recognized by this university. 2. To have spent one year at least of the four in one or more of the recognized institutions or schools in the United Kingdom. 3. To pass two examinations.

*First Examination.*

The First Examination commences on the first Monday in August. The candidate is required to produce certificates—1. Of having completed his nineteenth year. 2. Of having taken a degree in Arts in this university, or in a university the degrees granted by which are recognised by the senate; or of having passed the matriculation examination. 3. Of having been a student during two years at a medical school recognised by this university, subsequently to having taken a degree in Arts, or passed the matriculation examination. 4. Of having attended a course of lectures on each of four of the subjects in the following list: Descriptive and Surgical Anatomy, General Anatomy and Physiology, Comparative Anatomy, Pathological Anatomy, Chemistry, Botany, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Midwifery and Diseases peculiar to Women and Infants, Surgery, Medicine. 5. Of having dissected during nine months. 6. Of having attended a comprehensive course of Practical Chemistry. 7. Of having attended to Practical Pharmacy sufficiently to acquire a practical knowledge in the preparation of medicines. The fee for examination is five pounds. Candidates are examined in Anatomy, Physiology, Chemistry, Botany, (a syllabus of which may be had by application at the office of the university,) and Materia Medica and Pharmacy; they are also required to translate passages from the Latin Pharmacopœia. In the week next following the examination, the examiners arrange in two divisions such of the candidates as shall have passed; and a certificate, signed by the registrar, is delivered to each candidate.

*Examination for Honors.*

Any candidate who has been placed in the first division may be examined for honours, in the week following, in any or all of the following subjects:—Anatomy and Physiology, Chemistry, Materia Medica and Pharmaceutical Chemistry, and Structural and Physiological Botany. If in the opinion of the examiners sufficient merit be evinced, the can-

didates who distinguish themselves the most in Anatomy and Physiology, in Chemistry, and in Materia Medica and Pharmaceutical Chemistry, will each receive an exhibition of thirty pounds a year for the next two years; and the first and second candidates in each of the preceding subjects, and the first in Structural and Physiological Botany, will recieve a gold medal of the value of five pounds. Certificates of honor are given in each subject.

*Second Examination.*

The Second Examination commences on the first Monday in November. No candidate is admitted to this examination within two academical years of the first examination. Certificates required—1. Of having passed the first examination. 2. Of having subsequently attended a course of lectures on each of two of the subjects in the foregoing list, and for which the candidates did not present certificates at the first examination. 3. Of having, since the first examination, dissected during six months. 4. Of having conducted at least six labors. 5. Of having attended the surgical practice of a recognised hospital or hospitals during twelve months, and lectures on clinical surgery. 6. Of having attended the medical practice of a recognised hospital or hospitals during other twelve months, and lectures on clinical medicine. 7. Of having subsequently attended to practical medicine in a recognised hospital, infirmary, or dispensary, during six months. 8. Of moral character from a teacher in the last school or institution at which he studied. The fee for examination is five pounds. Candidates are examined in Physiology (including Comparative Anatomy); General Pathology, General Therapeutics, and Hygiene; Surgery; Medicine; Midwifery; Forensic Medicine; they are also required to translate passages of the Latin Pharmacopœia into English, and of the English Pharmacopœia into Latin, and to report on the cases of actual patients. In the following week the examiners arrange in two divisions such of the candidates as shall have passed; and a certificate under the seal of the University, and signed by the Chancellor, is delivered to each candidate.

*Examination for Honors.*

Any candidate who has been placed in the first division may be examined for honors, in the week following, in any or all of the following subjects:—Physiology and Comparative Anatomy, Surgery, Medicine, Midwifery. If in the opinion of the examiners sufficient merit be evinced, the candidates who distinguish themselves the most in Physiology and Comparative Anatomy, in Surgery, and in Medicine, will each receive an exhibition of fifty pounds per annum for the next two years, with the style of University Medical Scholar. The first and second candidates in each of the first three of the preceding subjects, and the candidate who distinguishes himself the most in Midwifery, each receive a gold medal of the value of five pounds. Certificates of honor are given in each subject.

*Examination for the Degree of Doctor of Medicine.*

The examination commences on the fourth Monday in November. Certificates required—1. Of having taken the degree of bachelor of

medicine in this university, or a degree in medicine or in surgery at a university the degrees granted by which are recognised by the senate. (Those candidates who have not taken the degree in this university must produce a certificate of having completed their twenty-third year.) 2. Of having attended, subsequently to having taken one of the above degrees, (*a*) to clinical or practical medicine during two years in a medical institution recognised by this university; (*b*) or, to clinical or practical medicine during one year, and of having been engaged during three years in the practice of his profession; (*c*) or, if he have taken the degree of bachelor of medicine in this university, of having been engaged during five years in the practice of his profession. (One year of attendance on clinical or practical medicine, or two years of practice, will be dispensed with in the case of those candidates who at the second examination were placed in the first division.) 3. Of moral character, signed by two persons of respectability. The fee for examination is ten pounds.

*Candidates are examined in the following subjects:*—Elements of Intellectual Philosophy, Logic, and Moral Philosophy; Medicine. A Commentary on a Case in Medicine, Surgery, or Midwifery, at the option of the candidate. *Viva voce* interrogations on the answers to the printed papers, and on the commentary. The candidate is also required to report on cases of actual patients. In the following week the examiners arrange in two divisions, each in alphabetical order, such of the candidates as shall have passed; and a certificate, under the seal of the university, and signed by the Chancellor, is delivered to each candidate.

*Regulations relating to Students who commenced their Medical Studies in or before January,* 1839.

*Degree of Bachelor of Medicine.*—Candidates who commenced their professional studies in or before January, 1839, being then not less than fourteen years of age, will be admitted to the first examination for the degree of bachelor of medicine, on producing certificates—1. Of having been engaged during two years in their professional studies. 2. Of having attended a course of lectures on each of four of the subjects comprehended in the foregoing list. 3. Of having dissected during nine months. 4. Of having attended to practical pharmacy.

They will be admitted to the second examination on producing certificates—1. Of having been engaged during four years in their professional studies. 2. Of having passed the first examination. 3. Of having attended a course of lectures on each of two of the subjects in the foregoing list, in addition to those for which certificates were produced at the first examination. 4. Of having dissected during twelve months. 5. Of having attended to practical pharmacy. 6. Of having conducted at least six labors. 7. Of having attended the surgical practice of a recognised hospital or hospitals during twelve months. 8. Of having attended the medical practice of a recognised hospital or hospitals during other twelve months. 9. Of having completed their twenty-second year. 10. Of moral character, from a teacher in the last

school or institution at which they studied. Candidates who have not taken a degree in Arts, or passed the matriculation examination, translate a portion of CELSUS *de Re Medica.*

*Regulations relating to Practitioners in Medicine or Surgery desirous of obtaining Degrees in Medicine.*

*Degree of Bachelor of Medicine.*—Candidates admitted to the two examinations on producing certificates—1. Of having been admitted, prior to 1840, members of one of the legally constituted bodies in the United Kingdom for licensing practitioners in medicine or surgery; or of having served, previous to 1840, as surgeons or assistant-surgeons in her Majesty's Army, Ordnance, or Navy, or in the service of the East India Company. 2. Of having received a part of their education at a recognised institution or school, as required by the charter of the university. 3. Of moral character, signed by two persons of respectability. Candidates who have not taken a degree in Arts, or passed the matriculation examination, translate a portion of CELSUS *de Re Medica.*

*Degree of Doctor of Medicine.*—Candidates are admitted to examination on producing certificates—1. Of having been engaged during five years in the practice of their profession. 2. Of having taken the degree of bachelor of medicine. Candidates who have not taken a degree in Arts, or passed the matriculation examination, translate a portion of CELSUS *de Re Medica.*

In the case of a candidate who fails to pass any one of the examinations, the fee is *not* returned to him, but he may present himself at a subsequent examination without any additional fee.

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ROYAL COLLEGE OF PHYSICIANS, LONDON.

*Pall-Mall East, Trafalgar-square.*

*President*—Dr. John Ayrton Paris.

*Censors*—Drs. Todd, Crawford, Webster, and Owen Rees.

*Elects*—Drs. Thomas Turner, Clement Hue, John Bright, Edward Thomas Monro, Thomas Mayo, Henry Herbert Southey, Francis Hawkins.

*Treasurer*—Dr. Edward Thomas Monro.

*Registrar*—Dr. Francis Hawkins.

*The Examiners for the Licence are the President and Censors.*—The examinations take place on or about Christmas, Easter, Midsummer, and Michaelmas. The Examiners for the Extra-Licence are the President and three Elects. The examinations for the Extra-Licence take place at the same time as the former.

FEES—*Licence*, £56 17*s.*, including £15 stamp. *Fellowship*, £55 1*s.*, including £25 stamp. *Extra-Licence*, about £25.

*Regulations, dated* 1838, *and now in force.*

Every candidate for a licence or extra-licence must produce evidence,

1. Of unimpeached moral character.
2. Of having completed the twenty-sixth year of his age.

3. Of having devoted himself for five years, at least, to the study of medicine.

The course of study thus ordered by the College comprises:—

Anatomy and Physiology; the Theory and Practice of Physic; Forensic Medicine; Materia Medica and Botany; and the Principles of Midwifery and Surgery.

Attendance for three entire years on the physicians' practice of some general hospital or hospitals in Great Britain or Ireland, containing at least 100 beds, and having a regular establishment of physicians as well as surgeons.

Candidates who have been educated abroad, in addition to the full course of study specified, must have diligently attended the physicians' practice in some general hospital in this country, for at least twelve months.

Candidates who have already been engaged in practice, and have attained the age of forty years, but have not passed through the complete course of study above described, may be admitted to examination upon presenting to the Censors' Board such testimonials of character, general and professional, as shall be satisfactory to the college.

The first examination is in anatomy and physiology; the second includes all that relates to the causes and symptoms of diseases; the third relates to the treatment of diseases.

The examinations are carried on usually during three days by writing, and two days *viva voce*. The *viva voce* part of each is carried on in Latin, except when the Board deems it expedient to put questions in English, and permits answers to be returned in the same language.

A competent knowledge of Greek is recommended, but is not indispensable, if the other qualifications of the candidate prove satisfactory. The candidate is called on to translate *viva voce* into Latin a passage from Hippocrates, Galen, Aretæus; or to construe into English a portion of the works of Celsus, or Sydenham, or some other Latin medical author, having been previously required, on three separate days, to give written answers in English to questions on the different subjects enumerated above, and to translate, in writing, passages from Greek or Latin books relating to medicine.

The fellows are elected from the body of licentiates—a certain number generally on the 25th of June.

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ROYAL COLLEGE OF SURGEONS OF ENGLAND.

*Lincoln's Inn Fields.*

*President.*—Cæsar H. Hawkins.

*Vice-Presidents.*—James Luke, and Robert Keate.

*The Council.*—The President and Vice-Presidents, G. J. Guthrie, T. Copeland, W. Lawrence, Sir B. C. Brodie, Bart., B. Travers, J. Swan, J. H. Green, E. Stanley, J. M. Arnott, J. F. South, F. C. Skey, B. B. Cooper, J. Hodgson, T. Wormald, G. Pilcher, J. Bishop, G. W. Mackmurdo, F. Kiernan, W. Coulson, G. Gulliver, and R. Partridge.

*Court of Examiners.*—The President and Vice-Presidents, G. J. Guthrie, W. Lawrence, B. Travers, E. Stanley, J. H. Green, J. M. Arnott, John F. South.

*Examiners for the Fellowship in Classics, Mathematics, and French.* G. Smith, G. G. Stokes, and I. Brasseur.

*Professor of Anatomy and Physiology.*—F. C. Skey.

*Hunterian Professor,* } R. Owen.
*Conservator of Museum.* }

*Conservator.*—J. T. Quekett.

*Librarian.*—T. M. Stone.

*Secretary.*—E. Belfour.

*Clerk.*—H. P. Gregg.

*Mace-bearer.*—W. Stone.

*Regulations of the Council respecting the Professional Education of Candidates for the Diploma of Member of the College.*

I. Candidates will be required to produce the following Certificates, viz.—

1. Of being twenty-one years of age.

2. Of having been engaged during four years in the acquirement of professional knowledge.

3. Of having studied practical pharmacy during six months.

4. Of having attended at a recognised hospital or hospitals in the United Kingdom the practice of physic during one winter* and one summer† session.

5. Of having attended, during three winter and two summer sessions, the practice of surgery at a recognised hospital or hospitals in the United Kingdom.

6. Of having studied anatomy and physiology, by attendance on lectures and demonstrations, and by dissections, during three winter sessions.

7. Of having attended, during two winter sessions, lectures on the principles and practice of surgery.

8. Of having attended, during one summer session, lectures on materia medica, and lectures on midwifery; practical midwifery to be attended at any time after the conclusion of the session.

9. And of having attended one course of lectures on the practice of physic, and one course on chemistry.

*** The course of study hereby prescribed is required to be observed by candidates who shall have pursued their studies in hospitals and schools in England. Those candidates who shall have studied in Scotland are required to bring certificates of having attended lectures on the

* The winter session comprises a period of six months, and, in England, commences on the 1st of October, and terminates on the 31st of March.

† The summer session comprises a period of three months, and, in England, commences on the 1st of May, and terminates on the 31st of July.

No provincial hospital will be recognized by this College which contains less than 100 patients; and no metropolitan hospital which contains less than 150 patients.

institutes of medicine during one winter session, and on anatomy during two other winter sessions, and on demonstrations and dissections during three winter sessions, (the foregoing regulations being in all other respects observed.) Candidates who shall have attended lectures on materia medica in the University of Dublin will be allowed to bring certificates of such attendance during the winter session.

II. Members or licentiates of any legally constituted College of Surgeons in the United Kingdom, and graduates in surgery of any university requiring residence to obtain degrees, will be admitted for examination on producing their diploma, licence, or degree, together with proof of being twenty-one years of age, and of having been occupied at least four years in the acquirement of professional knowledge.

III. Graduates in medicine of any legally constituted college or university requiring residence to obtain degrees, will be admitted for examination on adducing, together with their diploma or degree, proof of having completed the anatomical and surgical education required by the foregoing regulations, either at the school and hospital of the university where they shall have graduated, or at one or more of the recognised schools and hospitals in the United Kingdom.

IV. Candidates who shall have attended at recognised colonial hospitals and schools,* the medical and surgical practice and the several courses of lectures, with the demonstrations and dissections, required by the foregoing regulations, will be admitted for examination upon producing certificates of such attendance, together with certificates of having attended in London, during one winter session, the surgical practice of a recognised hospital, and lectures on anatomy, physiology, and surgery, with demonstrations and dissections.

V. Certificates will not be recognized from any hospital unless the surgeons thereto be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any school of anatomy and physiology or midwifery, unless the teachers in such school be members of some legally constituted College of Physicians or Surgeons in the United Kingdom; nor from any school of surgery, unless the teachers in such school be members of one of the legally constituted Colleges of Surgeons in the United Kingdom.

VI. Certificates will not be received on more than one branch of science from one and the same lecturer: but anatomy and physiology—demonstrations and dissections—will be respectively considered as one branch of science; and in those schools in Scotland or Ireland in which such division of those subjects is sanctioned by the College of Surgeons in each kingdom, the institutes of medicine,—anatomy, demonstrations, and dissections,—may be separately certified.

VII. Certificates will not be received from candidates who have studied in London, unless they shall have registered their tickets at the

*The recognition of colonial hospitals and schools is governed by the same regulations, with respect to number of patients, to courses of lectures, and to physicians, surgeons, and lecturers, as apply to the recognition of provincial hospitals and schools in England.

College, as required by the regulations, during the last ten days of January, March, and October in each year; nor from candidates who have studied elsewhere, unless their names shall duly appear in the registers transmitted during such studies from their respective schools.

By order of the Council,

*July 1st*, 1852. EDMUND BELFOUR, Secretary.

N. B. In the certificates of attendance on hospital practice and on lectures, it is required that the dates of commencement and termination be clearly expressed; and no interlineation, erasure, or alteration will be allowed.

Blank forms of the required certificates may be obtained on application to the secretary, to whom they must be delivered, properly filled up, ten days before the candidate can be admitted to examination; and all such certificates are retained at the College.

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The medical schools of London are dependent on and connected with the hospitals. The following list of the physicians and faculties in these joint institutions, we condense from the London Lancet for September 25th.

ST. BARTHOLOMEW'S HOSPITAL.—*Physicians*—Drs. Hue, Roupell, and Burrows. *Surgeons*—Messrs. Lawrence, Stanley, and Lloyd. *Assistant Physicians*—Drs. Farre, Jeaffreson, and Black. *Assistant Surgeons*—Messrs. Skey, Wormald, and Paget. *Physician Accoucheur*—Dr. West.

ST. BARTHOLOMEW'S COLLEGE. *Winter Session.*—Medicine, Dr. Burrows. Descriptive and Surgical Anatomy, Mr. Skey. General and Morbid Anatomy, and Physiology, Mr. Paget. Practical Anatomy, Messrs. Holden, Holmes, and Coote. Surgery, Mr. Lawrence. Chemistry, Mr. Stenhouse. *Summer Session.*—Materia Medica and Therapeutics, Dr. Roupell. Midwifery and the Diseases of Women and Children, Dr. West. Botany, Dr. Farre. Practical Chemistry, Mr. Stenhouse. Forensic Medicine, Dr. Baly. Comparative Anatomy, Mr. McWhinnie. Natural Philosophy, Dr. Gibbon.

CHARING-CROSS HOSPITAL.—*Consulting Physician.* Dr. Shearman, *Physicians*, Drs. Golding and Chowne. *Assistant Physician*, Dr. Rowland. *Surgeons*, Messrs. Hancock and Avery.

MEDICAL AND SURGICAL SCHOOL. *Winter Session.*—Chemistry, Mr. Lewis. Descriptive and Surgical Anatomy, Dr. E. Smith. General Anatomy and Physiology, Mr. Canton. Principles and Practice of Medicine, Drs. Chowne and Rowland. Principles and Practice of Surgery, Mr. Hancock. *Summer Session.*—Practical Chemistry, Mr Lewis. Materia Medica and Therapeutics, Drs. Steggall and Willshire. Principles and Practice of Midwifery, and the Medical Treatment of Women and Children, Dr. Chowne, and Mr. Hird. Medical Jurisprudence, Dr. Birkett and Mr. Hird.

ST. GEORGE'S HOSPITAL. *Physicians*—Drs. Wilson, Nairne, Page, and Bence Jones. *Assistant Physicians*—Drs. Pitman and Fuller. *Surgeons*—Messrs. Keate, Cæsar Hawkins, Cutler, and Tatum. *Assistant Surgeons*—Messrs. Johnson and Hewett.

MEDICAL AND SURGICAL SCHOOL. *Winter Session.*—Anatomy, General, and Physiology, Mr. A. Johnson. Anatomy, Descriptive and Surgical, Messrs. Hewett and Pollock. Chemistry, Mr. Noad. Medicine, Drs. Nairn and Page. Surgery, Mr. Tatum. *Summer Session.*—Materia Medica, Dr. Pitman. Midwifery, Dr. R. Lee. Botany, Mr. Henfrey. Medical Jurisprudence, Dr. Fuller and Mr. H. Johnson.

GUY'S HOSPITAL. *Consulting Physician*—Dr. Bright. *Physicians*—Drs. Addison, Babington, and Barlow. *Assistant Physicians*—Drs. Hughes, Owen Rees, Golding Bird, and Gull. *Surgeons*—Messrs. B. Cooper, Cock, and Hilton. *Assistant Surgeons*—Messrs. Birkett and Poland. *Obstetric Physicians*—Drs. Lever and Oldham. *Surgeon Dentist*—Mr. Bell. *Surgeon of the Eye Infirmary*—Mr. France. *Apothecary*—Mr. Stocker.

MEDICAL AND SURGICAL SCHOOL. *Winter Session.*—Anatomy, Descriptive, Surgical, and Pathological, Messrs. Hilton and Birkett. Physiology, Dr. Gull. Demonstrations on Anatomy, Mr. Callaway and Dr. Habershon. Chemistry, Dr. Taylor. Medicine, Dr. Addison. Surgery, Mr. Bransby Cooper. Natural Philosophy, Dr. Lloyd. Moral Philosophy, Rev. T. H. Bullock. Clinical Medicine, Drs. Addison, Babington, and Barlow. Clinical Surgery, Messrs. Bransby Cooper, Cock, and Hilton. Clinical Lectures on Midwifery and Diseases of Women, Drs. Lever and Oldham. *Summer Session.*—Demonstrations on Cutaneous Diseases, Dr. Addison. Materia Medica, Drs. Golding Bird and Rees. Clinical Lectures, Drs. Hughes, Owen Rees, and Golding Bird. Regional Anatomy, Mr. Hilton, or Mr. Birkett. Dental Surgery, Messrs. Bell and Salter. Pathological Anatomy, Dr. Lloyd. Midwifery, Drs. Lever and Oldham. Medical Jurisprudence, Dr. Taylor. Comparative Anatomy, Drs. Gull and Habershon. Ophthalmic Surgery, Mr. France. Botany, Mr. Johnson. Practical Chemistry, Dr. Odling.

KING'S COLLEGE HOSPITAL. *Consulting Physicians*—Drs. Watson and Ferguson. *Physicians*—Drs. Budd and Todd. *Physician Accoucheur*—Dr. A. Farre. *Physician to Out-Patients*—Dr. Guy. *Assistant Physician*—Dr. G. Johnson. *Surgeons*—Messrs. Fergusson and Partridge. *Assistant Surgeons*—Messrs. Bowman and Lee. *Surgeon Dentist*—Mr. Cartwright.

KING'S COLLEGE, MEDICAL DEPARTMENT.—Anatomy, Descriptive and Surgical, Mr. Partridge. Demonstrations, Messrs. Lee, Salter, and Wood. Physiology, General and Morbid Anatomy, Drs. Todd and Bowman. Chemistry, Dr. W. A. Miller. Medicine, Dr. Budd. Surgery, Mr. Fergusson. *Summer Session.*—Midwifery, Dr. A. Farre. Materia Medica and Therapeutics, Dr. Royle. Botany, Mr. Forbes. Forensic Medicine, Dr. Guy. Practical Chemistry, Mr. J. E. Bowman, Comparative Anatomy, Mr. R. Jones.

THE LONDON HOSPITAL. *Physicians*—Drs. Cobb, Little, and Pereira. *Assistant Physicians*—Drs. Fraser, Davies, and Parker. *Consulting Physicians in Obstetric Cases*—Dr. Ramsbotham. *Surgeons*—Messrs. Luke, Adams, and Curling. *Assistant Surgeons*—Messrs. Critchett, N. Ward, and Wordsworth.

MEDICAL AND SURGICAL SCHOOL. *Winter Session.*—Medicine, Dr. Little. Surgery, Messrs. Curling and Critchett. Descriptive and Surgical Anatomy, Mr. J. Adams. General Anatomy and Physiology, Dr. Carpenter. Practical Anatomy, Messrs. N. Ward, and Brown. Chemistry, Mr. Letheby. Anatomy and Pathology of the Teeth and Dental Surgery, Mr. Barrett. *Summer Session.*—Midwifery and Diseases of Women and Children, Dr. Ramsbotham. Forensic Medicine, Drs. Ramsbotham and Letheby. Materia Medica and Therapeutics, Dr. Davies. Practical Chemistry, Dr. Letheby. Botany, Mr. Bentley, Comparative Anatomy, Dr. Carpenter.

ST. MARY'S HOSPITAL. *Physicians*—Drs. Alderson, Chambers, and Sibson. *Surgeons*—Messrs. Coulson, Lane, and Ure. *Physician Accoucheur*—Dr. Tyler Smith. *Surgeon Accoucheur*—Mr. Baker Brown. *Ophthalmic Surgeon*—Mr. W. Cooper. *Aural Surgeon*—Mr. Toynbee. *Assistant Physicians*—Drs. H. Jones, Sieveking, and Markham. *Assistant Surgeons*—Messrs. Smith, Walton, and Lane. *Dental Surgeon*—Mr. Nasmyth.

MIDDLESEX HOSPITAL. *Physicians*—Drs. F. Hawkins, Crawford, and S. Thompson. *Physician Accoucheur*—Dr. Frere. *Assistant Physician*—Dr. Stewart. *Surgeons*—Messrs. Shaw, De Morgan, and Moore. *Assistant Surgeon*—Mr. Henry. *Surgeon Dentist*—Mr. Tomes. *Apothecary*—Mr. Corfe.

MEDICAL AND SURGICAL SCHOOL. *Winter Session.*—Physiology and General Anatomy, Mr. De Morgan. Anatomy, Descriptive and Surgical, Mr. Moore. Practical Anatomy, Mr. Nunn and Dr. Van der Byl. Chemistry, Mr. T. Taylor, and Heisch. Medicine, Drs. Crawford and S. Thompson. Surgery, Mr. Shaw. Morbid Anatomy, Mr. Henry. Practical Pharmacy, with Dispensing, Mr. Corfe. *Summer Session.*—Materia Medica, &c., Dr. Stewart. Midwifery, Dr. Frere. Botany, Mr. Bentley. Medical Jurisprudence, Dr. Goodfellow. Demonstrations in Anatomy, Mr. Nunn. Comparative Anatomy, Mr. Waterhouse. Practical Chemistry, Messrs. Taylor and Heisch.

ROYAL FREE HOSPITAL. *Physicians*—Drs. Chambers and Brinton. *Surgeons*—Messrs. Marsden, Gray, and T. Wakley. *Assistant Surgeon*—Mr. T. W. Cooke. *Medical Officer for Diseases of Children*—Mr. T. C. Jackson. *Dentist*—Mr. Robinson.

ST. THOMAS' HOSPITAL. *Consulting Physician*—Dr. Roots. *Physicians*—Drs. Barker, Leeson, and Risdon Bennett. *Assistant Physicians*—Drs. Goolden, Cohen, and Peacock. *Surgeons*—Messrs. Green,

South, and Mackmurdo. *Assistant Surgeons*—Messrs. Solly and Clark. *Midwifery Department. Physicians*—Drs. Waller and Griffith. *Ophthalmic Department. Surgeon*—Mr. Mackmurdo.

MEDICAL AND SURGICAL COLLEGE.—Anatomy Demonstrations, Messrs. Rainey and Crosby. Physiology and General Anatomy, Mr. Grainger. The Teeth, their Structure and Diseases, Mr. Saunders. Microscopical Anatomy, Messrs. Grainger and Rainey. Surgery, Messrs. Green and South. Post Mortem Examinations, Messrs. Adams and Bristowe. Descriptive and Surgical Anatomy, Mr. Clark. Theory and Practice of Medicine, Dr. Barker. Chemistry, Dr. Leeson. Ophthalmic Surgery, Mr. Mackmurdo. *Summer Lectures.*—Comparative Anatomy and Natural History, Dr. Meryon. Medical Jurisprudence, Dr. Barker. Materia Medica, Dr. Risdon Bennett. Midwifery, Dr. Waller. Botany, Mr. Bristowe. Pathology, Mr. Simon. Practical Chemistry, Dr. Gladstone.

UNIVERSITY COLLEGE HOSPITAL. *Physicians*—Drs. Walshe, Parkes, and Garrod. *Obstetric Physician*—Dr. Murphy. *Assistant Physicians*—Drs. Jenner and Hare. *Surgeons*—Messrs. Quain and Erichsen. *Consulting Surgeon to Eye Infirmary*—Mr. Quain. *Ophthalmic Surgeon*—Mr. Wharton Jones. *Assistant Surgeons*—Messrs Marshall and Statham.

FACULTY OF MEDICINE. *Winter Session.*—Principles and Practice of Medicine, Dr. Walshe. Anatomy and Physiology, Dr. Sharpey. Chemistry, Mr. Graham. Anatomy, Descriptive, Practical, and Surgical, Mr. Ellis. Principles and Practice of Surgery, Mr. Erichsen. Analytical Chemistry, Dr. Williamson. Comparative Anatomy and Zoology, Dr. Grant. Natural Philosophy, Prof. Potter. *Summer Session.*—Botany, Dr. Lindley. Pathological Anatomy, Dr. Jenner. Comparative Anatomy and Zoology, Dr. Grant. Palæo-Zoology, Dr. Grant. Practical Chemistry, Dr. Williamson. Medical Jurisprudence, Dr. Carpenter. Midwifery, &c., Dr. Murphy. Ophthalmic Medicine and Surgery, Mr. Wharton Jones. Materia Medica and Therapeutics, Dr. Garrod.

WESTMINSTER HOSPITAL.—*Consulting Physician*—Dr. Bright. *Physicians*—Drs. Roe, Kingston, and Basham. *Assistant Physician*—Dr. Woodfall. *Consulting Surgeons*—Messrs. Guthrie and Hale Thomson. *Surgeons*—Messrs. Lynn, Phillips, and Holt. *Assistant Surgeon*—Mr. C. G. Guthrie. *Surgeon Dentist*—Mr. Clendon.

MEDICAL AND SURGICAL SCHOOL. *Winter Session.*—Anatomy and Physiology, Messrs. Hillman and Brooke. Anatomy, Descriptive and Surgical, Mr. Holthouse. Anatomical Demonstrations, Mr. Power. Surgery, Messrs. Phillips and Holt. Medicine, Drs. H. Roe and Basham. Chemistry, Mr. Lewis. Dental Surgery, Mr. Clendon. *Summer Session.*—Materia Medica, Dr. Basham. Midwifery, Dr. F. Bird. Forensic Medicine, Drs. Fincham and Tanner. Botany, Dr. Radcliffe. Practical Chemistry, Mr. H. Lewis. Natural Philosophy, Mr. H. Brooke.

School of Anatomy and Medicine, adjoining St. George's Hospital. *Winter Session.*—Anatomy and Physiology, Messrs. Lane, Blenkins, and J. R. Lane. Descriptive and Surgical Anatomy, Messrs. Blenkins, and J. R. Lane. Chemistry, Mr. Rodgers. Medicine, Drs. Daniell and Sibson. Surgery, Messrs. Pilcher and Smith. *Summer Session.*—Materia Medica and Therapeutics, Dr. Lankester. Midwifery, Mr. Bloxam. Medical Jurisprudence, Mr. Warder. Botany, Dr. Lankester. Practical Chemistry, Mr. Rodgers.

Hunterian School of Medicine. *Winter Session.*—Principles and Practice of Medicine, Dr. Aldis. Principles and Practice of Surgery, Mr. Dampier. Anatomy and Physiology, Mr. Chippendale. Descriptive and Surgical Anatomy, Mr. Grant. Chemistry, Mr. Ashley. *Summer Session.*—Materia Medica, Dr. Smyth. Midwifery and Diseases of Women and Children, Dr. Gordon Bailey. Morbid Anatomy, Mr. H. Thompson. Practical Chemistry, Mr. Ashley. Medical Botany, Mr. C. P. Johnson. Forensic Medicine, Dr. R. Chambers.

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ERRATA.

*To the Editors of the Medical Examiner:*—In my article on *Dysentery*, in the September number of the *Examiner*, the types make me perpetrate some very bad grammar. Page 571, 20th line from the top, for *is* read *are*. Page 572, 23d line from top, there is a sentence which reads thus: "I can call to mind at least half a dozen cases of death from this disease, in the commencement of my practice, *which, after reflection, convinces* me might possibly have been saved by copious blood-letting." The part of the sentence italicised should have no comma, and there should be a hyphen between *after* and *reflection*, thus: "I can call to mind at least half a dozen cases of death from this disease, in the commencement of my practice, *which after-reflection convinces* me might possibly have been saved by copious blood-letting."

Yours. Geo. L. Upshur.

*Norfolk, Va.*, Sept. 9th, 1852.

## MEDICAL NEWS.

At a meeting of the Students of the Medical Department of the University of New York, held Oct. 18th, 1852, the following preamble and resolutions were unanimously adopted:

*Whereas*, The successful practice of the "Healing Art" imperatively demands a knowledge of the functions of the various organs of the animal economy, which branch of Medical knowledge has been too much neglected, but is now justly engaging the attention of, and becoming properly appreciated by the Profession; and, *Whereas*, Dr. BROWN SEQUARD, of Paris, in his experiments and investigations for the advancement of Physiological science, has arrived at conclusions, and rendered truths demonstrable, which have been heretofore unknown or conjectural; Therefore,

*Resolved*, That Dr. SEQUARD is entitled to the commendation of the Medical Profession, and merits their approbation; and further

*Resolved*, That we hereby tender him our sincere and heartfelt thanks, as an humble testimonial of our appreciation of his instructive and interesting series of Lectures before the class.

*Resolved*, That while our thanks are eminently due to Dr. SEQUARD, they are no less due to the Faculty of the University for his introduction to the class, as well as for their untiring efforts in sustaining in an able and superior manner the past summer's course of lectures.

*Resolved*, That we hereby tender them our most hearty thanks.

*Resolved*, That a copy of these resolutions be presented to Dr. SEQUARD and the Faculty of the University, and published in the Herald and Tribune. Signed in behalf of the class.

P. T. TUNISON, Chairman.

H. HALSEY TICHENOR, Secretary.

TRIBUTE TO DR. HOOKER.—At a meeting of the Norwich Medical Association, August 12th, 1852, a committee was appointed to draft resolutions in regard to the anticipated removal of Dr. WORTHINGTON HOOKER to New Haven. The following, proposed by the committee, were unanimously adopted, and ordered to be published in such journals as the committee should think proper.

*Whereas*, The Members of the Norwich Medical Association, desiring to avail themselves of the opportunity for expressing their regard for Dr. Hooker on the occasion of his retiring from the practice of his profession in this place, and feeling warmly attached to him personally, for his kind professional intercourse and the uniform courtsey and patience which have distinguished him in the discharge of his duties, and having a high esteem and regard for him as a talented and accomplished physician,—therefore,

*Resolved*, That we sincerely regret the separation from us of one who

has set so eminent an example of true professional honor, and who has ever so scrupulously regarded the rights and feelings of his medical brethren.

*Resolved*, That such an example puts to shame too many medical practitioners of the present day, who seem to be governed by an overbearing spirit, or by a crafty, insinuating disposition, wounding at every step the fair fame of those whom they should treat as brethren.

*Resolved*, That in his work entitled "PHYSICIAN AND PATIENT," Dr. Hooker exhibited rare qualities that have justly secured to him the esteem and confidence of the great body of the profession throughout the country; and that the prominent position which he now holds among medical men, resulting from these qualities, indicates for him a career of great and extensive usefulness in the new relation to which he has been called.

*Resolved*, That in Dr. Hooker's untiring zeal and industry, in his careful habits of investigation, in his sound and wise discrimination in the application of medical principles, and in the operations of his clear and vigorous mind, enlightened and instructed by the various learning of his profession, we see the true causes of the eminence to which he has attained.

*Resolved*, That we congratulate the Faculty of Yale College, and the Medical Profession in the city of New Haven, upon their good fortune in securing for the Chair of the Theory and Practice of Medicine a gentleman so fully possessing the requisite qualities for filling that position.

HORACE THURSTON,
*Secretary of the Association.*

Norwich, Sept. 17th, 1852.

APPOINTMENT.—The Board of Trustees of the New Hampshire State Lunatic Asylum have elected JOHN E. TYLER, M. D., Superintendent of that Institution.

EMIGRANTS' HOSPITAL, WARD'S ISLAND, N. Y.—Dr. Thomas Addis Emmet has been appointed one of the "Visiting Physicians" to this Hospital. Dr. Emmet has won the confidence of the Board of Managers by his constant and unremitting devotion to his duties, as resident physician during the past two years, and has been rewarded by this high honor, rarely bestowed on one so young in years and the profession.

NEW MEDICAL SCHOOL.—A new Medical School has been established at Cincinnati, styled the "*Miami Medical College of Cincinnati.*" The Professors are the venerable and distinguished Dr. Mussey, and Drs. Judkins, Avery, Davis, White (late of Philadelphia,) Mendenhall, Murphy, Comegys, and Locke, Jr.

PROFESSORIAL APPOINTMENTS.—Dr. J. LAWRENCE SMITH, of the University of Louisiana, has been elected to succeed Dr. R. E. ROGERS,

in the Chair of Chemistry in the University of Virginia. This appointment is highly satisfactory to the friends of this excellent Institution.

Drs. PALMER and FLINT, of the University of Buffalo, have succeeded Drs. Cobb and Drake in the University of Louisville, the latter gentlemen having accepted Chairs in the Medical College of Ohio.

Dr. E. M. MOORE, of Woodstock, Vt., takes the Chair of Anatomy in the University of Buffalo, vacated by Dr. Palmer.

TRANSYLVANIA MEDICAL JOURNAL.—Dr. L. J. FRAZEE has assumed the editorial duties of this Journal.

CHOLERA.—The latest intelligence from Prussia is rather satisfactory as regards the progress of cholera, for although it has spread through the Polish territories, not only has its virulence abated, but the number of cases has also diminished. At Berlin three hospitals have been opened, and at Posen, from the 20th of July to the 20th of September, there were 2491 cases and 1235 deaths. All the public schools have been closed; and at Konisberg, M. Von Treschowitz and M. Waldow connected with the legislature, have died. At Posen, the wife of M. Von Pattkamaner, the President, also died of cholera.

BARON HUMBOLDT attained his 83rd birth-day on the 14th of Sept. This "Nestor of Science" is in excellent health, and is engaged daily for hours on a fourth volume of "Cosmos."

MEDICAL FEES IN SPAIN.—The fee of a Spanish physician at present is said to be twopence from a tradesman, tenpence from a man of rank, and nothing from the poor. In France, the fee from a tradesman is from three to five francs; from a man of rank and wealth the amount varies, large sums being occasionally given.

M. WURTZ, Professor at the Ecole de Médécine, has succeeded in extracting from the oil of potatoes a new alcohol, which he calls *Alcoöl entylique*. It is obtained by repeated distillations. Its composition is $C_8\ H_{10}\ O_2$.

M. DIZE, a distinguished chemist, Member of the Académie de Médecine, and of various learned societies of France, died lately, aged 88. When yet a young chemist, he established the manufacture of artificial soda, which has become to France the source of a revenue of a million of francs. On the breaking out of the first Revolution, he organized at the Ecole Militaire the central pharmacy of the armies of the Republic. He also invented new processes for refining gold and

silver, and did various services for public departments of the State.—*London Med. Times.*

THE AUTOBIOGRAPHY OF BERZELIUS.—After the death of this great Swedish chemist, it was found that he had left behind him a copious and highly interesting biography, for the publication of which we have long and anxiously waited. It appears, however, that the autobiography contains so many personal allusions, and so many unsparing criticisms of living or recently deceased scientific men, that the executors are not only afraid of publishing, but are actually prevented from doing so by the laws of Sweden, which forbid the printing of works dealing in personalities, until several years after the death of their authors From the known dislike of Berzelius to Sir Humphry Davy, and to the recently deceased Dr. Thomas Thomson, it is supposed that these eminent chemists figure largely in the suppressed work. We feel sure that the surviving relatives of these distinguished men would prefer the opportunity of answering such criticism themselves, rather than leave the task to a future generation. We trust that the obstacles which prevent the appearance of this—as we are told—remarkable work, may be overcome, and that speedily.—*London Lancet.*

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# RECORD OF MEDICAL SCIENCE.

## MATERIA MEDICA AND THERAPEUTICS.

*On the use of Manganese as an Adjuvant to Iron.*—M. PETREQUIN quotes various authors to prove that manganese is a normal constituent of animal and vegetable tissues; and believes that wherever iron is present in appreciable quantity, manganese coexists with it. Hence iron alone will not always succeed in blood-diseases. M. Pétrequin has observed many cases of chlorosis, which have resisted iron as obstinately as anæmia connected with cancer or organic degeneration. Other cases again, after deriving a certain amount of benefit from iron, remain stationary. Others again appear cured by iron, but the cure is not permanent. The remedy required in these cases, M. Pétrequin finds to be manganese. He does not give it or iron alone; but combines them.

It is especially in *diseases of the blood* that ferro-manganic medicines are useful. They have a special action on the vascular apparatus, on the formation of the blood, and on the circulating fluid itself. They do not act merely as tonics or astringents; but are regenerators of the blood. They have succeeded admirably in anæmia following hæmorrhage, operations, polypi, metrorrhagia, &c., also in the chlorosis attending puberty,

which is a more common disease than is generally supposed, and occurs even in males. M. Pétrequin has also frequently found the combinations of iron with manganese of benefit in the diseases of women at the critical period. He has often seen, in these subjects, *metrorrhagia*, accompanied with an aspect of the surface which would lead to the suspicion of organic uterine disease: the hæmorrhage, however, was but a complication, and the patients, apparently in a hopeless state, have recovered under the use of ferro-manganic preparations, conjoined with tonics and ergotine.

In *amenorrhœa* and *dysmenorrhœa*, the patients often imagine that they require to be bled; but care must generally be taken not to comply with this request. M. Pétrequin has more than once seen cases of amenorrhœa with severe chlorosis, in which it has not been desirable to hasten the appearance of the catamenia—the consequent loss of blood aggravating the disease. The general state of health must here be carefully attended to. Œdema of the lower limbs sometimes occurs in these cases; but it is a less severe complication than when it attends metrorrhagia. It often disappears, as the patient recovers, under the use of iron and manganese.

These medicines are no less efficacious in the treatment of *anæmia* resulting from prolonged intermittent fevers, prolonged suppuration, strumous, syphilitic, or cancerous affections, phthisis, &c. Pills and the syrup of the iodide of manganese and iron are preferable in these cases.

In all these cases, the ferro-manganic preparations do not merely act on the stomach and nervous system, but they are absorbed and assist in the formation of hæmatosine and new blood-globules, so as to restore the blood to its normal condition. Their effect in this way is greater than that of iron alone.

In the *functional affections of the heart* connected with chlorosis and anæmia, and which must not be mistaken for organic disease, a combination of iron and manganese with digitalis and other moderators of the heart's action is advantageous. The same remark applies to the *functional disorders of the lungs*, attending the same constitutional states. *Disordered states of the nervous system* are intimately connected with those of the blood. M. Pétrequin has found that the ferro-manganic preparations succeed well in these, even though uncomplicated with chlorosis. He, as well as M. Gubian, has observed that iron is here better tolerated when combined with manganese. He has also seen benefit from the use of iron with manganese in many cases of *dyspepsia, gastralgia, gastro-enteralgia*. Nervous affections of the digestive organs are often the result of chlorosis; and, where stomachics and cinchona have failed, iron has often been found (especially the carbonate, by some English physicians) to be of service. Gastrodynia complicating chlorosis has often yielded to the use of ferro-manganiferous water, and to pills of carbonate of iron and manganese.

In *nervous affections connected with exhaustion* from venereal excesses, onanism, rapid growth, &c., as well as in leucorrhœa, diabetes, &c., M. Pétrequin has a high opinion of these medicines. He is continuing his researches on their action in certain cases of sterility from asthenia

and in some hyposthenic affections of the scalp, such as early baldness, alopecia, &c.

M. Pétrequin has confined his observations to a limited number of the ferro-manganic preparations; and has made many observations before publishing the formulæ which he finds most useful. Having found, even at an early period, that the medicines were liable to adulteration, he has availed himself of the assistance of competent pharmaceutists. Since the publication of his first memoir, in 1849, these medicines have been extensively used in the south of France and in foreign countries.

The formulæ are few and correspond to the preparations of iron generally used in France. They are; 1. *Pills* of carbonate of iron and manganese, or of iodide; 2. *Lozenges* of lactate of iron and manganese; 3. *Syrups* of lactate or of iodide of iron and manganese; 4. Ferro-manganic *chocolate;* 5. *Effervescing solution* of iron and manganese.

It has been observed that manganese not only preserves water, but purifies that which has undergone change—(Martin-Lauzer.) Ferro-manganic waters (of which there are many in France and other parts of the continent) can be preserved and carried to a distance;—which cannot generally be done with simple ferruginous waters.

M. Pétrequin commences by giving a powder of iron and manganese, with some vinous drink; he then administers two pills daily, one before breakfast and one before dinner, replacing them soon by the lozenges. The syrups and chocolate complete the treatment. He gives the medicines at meal time. The syrup he gives before breakfast, in doses of a teaspoonful; and he finds it useful to administer directly after it some infusion of centaury, or of chamomile flowers and orange.

Large doses are unnecessary and useless; for they are liable to produce irritation of the stomach and exhaustion of the nervous system; and the reparation of the blood is slow and progressive, and cannot, even were it desirable, be effected rapidly. Besides the iron and manganese are not absorbed in any greater quantity, if large doses are given.—*Dublin Med. Press.*

THE

# MEDICAL EXAMINER,

AND

# RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. XCVI.—DECEMBER, 1852.

## ORIGINAL COMMUNICATIONS.

*Surgical Sketches.* By W. E. HORNER, M. D., Prof. of Anatomy in the University of Pennsylvania, Senior Surgeon at the St. Joseph's Hospital, &c. &c.

*A Military Hospital at Buffalo, New York, in the year* 1814.

The concentration of numerous forces at this post early in the spring—the arrival of many officers of high grade—the accumulation of large amounts of military stores—the daily drills and parades lasting from eight to ten hours—the presence of Major General Brown in command, with the recently appointed Brigadiers General Scott and Ripley of the Regular Army, and the chivalrous General Peter B. Porter, of the New York militia, all led to the conviction that a great enterprize was at hand; and that the young medical aspirants of this division of the United States forces, and all of us who felt desirous of some degree of experience in surgical matters for our better instruction, were likely to obtain it before long. The cessation of the wars in Europe, by the abdication and downfall in April of the most renowned of moderns, the Emperor Napoleon, in leaving the

British veterans unemployed at home, was an assurance also that they would be brought into the field against us; and that a conflict of the most sanguinary kind for the numbers engaged was about to commence.

Each party sustained by its warrant of national bravery and enterprize, and stimulated by a belief of wrongs unjustly suffered, felt the desire of redressing them through the ultima ratio on the field of battle. On the one side, we had the institutions of our country to make good against an enemy of all others the most capable of prostrating them, and of reducing us once more to a colonial state. The Government of Great Britain, on the other side, had to assuage the recollections of the American Revolution, and to punish us for the audacity of a declaration of war against her, made at a time when she was too much employed in Europe to direct any large division of her forces upon us.

It was evident that a struggle of no ordinary might was at hand. The skill, the confidence, and the steadiness of the heroes of the Peninsular campaigns, who had fought under Wellington, were to be tried against the ardor, the impetuosity, and the devotion to country of American soldiers. Laurels gained were to be in the same field against laurels in hope or desire. The tramp of battalions, the display in line, the practised fusillade, the dashing evolutions of artillery, the mimic charges of cavalry, the shrill penetrating word of command as it rang through the air,* all served to keep up the military animation now glowing in the bosoms of the American columns.

*General Scott's voice at this time was as remarkable for its military tone, as his bearing and person were for their military contour. His stature is so well known in the United States, that it is scarcely necessary to say that he stood upwards of six feet. This favorite of that day with both soldiers, officers and the community, had risen very rapidly from the commission of Capt. of Artillery to the rank of Brigadier General. Opening his career of distinction at the battle of Queenstown Heights in 1812, as Lieut. Col, his valor on the occasion, and in the campaign of 1813, when Toronto (then Little York) and Fort George were taken, marked him out as one of the master spirits of the time. In 1814 he therefore appeared at the head of a brigade, and as the right arm of Major General Brown, an officer of great energy, but less practice than General Scott.

Such has been the rapid progress of our country in all the elements of power and of greatness since that period, that now are scarcely to be realized the difficulties and discouragements of its position then. It was at that period a much more responsible affair for the infant power of the United States to take a hostile attitude against the matured and colossal one of Great Britain than at present. This, however, is said in the most friendly spirit, and with a full desire that empires so capable of mutual injury and of disturbing the repose of the entire world, may both have the good sense and the high moral tone, to cultivate to the utmost reciprocal good will, and the commercial interchange of objects of national skill and industry, upon which the prosperity and happiness of both countries so essentially depend.

In the year 1813 I had seen but little service, my commission as Hospital Surgeon's Mate, dated July 3d, and signed by Gen. Armstrong, Secretary at War, having come to hand too late for any of the important field operations. The town of Little York, Upper Canada, had been taken, April 27th, and Fort George, at the foot of the Niagara River, on May 27th. The former with a very heavy loss, principally from the explosion of a British magazine; among the victims to which was General Zebulon Pike, the most promising officer of the time.

The American force at York consisted of about seventeen hundred men, and the British of about eighteen hundred. The former lost three hundred and twenty in killed and wounded, the latter about four hundred. Dr. James Mann,* Hospital Surgeon being attached to the expedition, says that the American column halted at a distance of four hundred yards from the enemy's batteries to reconnoitre, and that at this moment the explosion occurred, whereby sixty rank and file were killed, and one hundred and eighty wounded and mangled in a most wretched and deplorable mannner, by the fall of stones which formed the magazine.

The attack on Fort George commenced by a heavy cannonade on the 25th and 26th of May, from Fort Niagara and batteries recently erected, and the assault was made on the 27th. In the attack on Fort George, the Americans had about four thousand troops, of which twenty-seven were killed and eighty-seven

*Medical Sketches, &c. p. 61. Dedham, 1816.

wounded. The British loss was estimated at one hundred and two killed and 175 wounded.*

The battle was fought near the shore of Lake Ontario. Dr. Mann, who was on the spot immediately after the action, says that he found on the high bank in a space of fifteen by two hundred yards near four hundred men either killed or wounded, the number being made up from both armies as they lay intermixed. The contest was evidently a very severe one.

Expeditions having a disastrous result were sent out afterwards, one to Stoney Creek, and another to Beaver Dam. In the first, the two general officers were taken prisoners, and the troops returned precipitately to Fort George. In the second, a brilliant command of six hundred men laid down their arms to a body of the enemy scarcely large enough to guard them, having been made by a course of strategy to believe that they were surrounded and on the eve of an attack from an overwhelming force.

Many capital operations both upon the wounded Americans, and English who were taken prisoners, resulted from these several actions.

On my arriving at Fort George in August 1813, the army was tranquil, and there was no special duty for myself. At that time, it had been determined that the forces should leave this position and make a descent upon Montreal.

The General Hospital was then at Lewistown under Dr. Mann. Nearly about this period more than one third of the soldiers of the army were on the sick report. Half of the medical staff attached to regiments were disabled. Of seven surgeons' mates belonging to the Hospital one died, three had leave of absence, and the other three were for a short period sick. At one time, with a sick list of some six or seven hundred men, only three surgeons were present for duty. The diseases were typhus and intermittent fevers, diarrhœa, and dysentery.†

From the preceding battles and from some skirmishes on the outposts, there remained many who, from the nature of their wounds, were incapable of further military duty.

A detachment of some seventy three such soldiers, of which I

*Mann, loc. cit. p. 62.

†Mann loc. cit. p. 66. et. seq. See appendix No. 1.

still have the original list, dated Sept. 20, and also the General Order directing their destination, was committed to my professional charge, under the command of Lieut. Whiting, 23d Infantry, with direction to take these "brave and unfortunate men" to Greenbush by Oswego, and that they be treated on the way with the utmost kindness and attention. Many of them had been most distressingly mutilated by the fall of stones at the explosion of the York magazine, and some still required surgical dressing. Military orders are of obligation, and the execution of them was instituted forthwith.

Dr. Mann. loc. cit. p. 94, has inserted the name Hugo, and there is also some mistake about the officer in command, it, according to him, being Lieut. Archer, regimental pay-master, instead of Lieut. Whiting. He may be in one sense correct, that the officers alluded too were possibly detached originally for the duty; but the documents in my hands show the persons who executed it to have been as stated by myself. The following general order and list of the invalids referred to is inserted, as upon it there may be names interested in the recent distribution of public lands to the soldiers of that period, and where the muster rolls and other authentic documents of service may have been lost, owing to the destruction by the enemy of the public archives at Washington by fire, the subsequent season.

*Report of wounded soldiers, subjects for furloughs in the General Hospital, at Lewistown, Sept. 20th,* 1813.

| No. | Names. | Reg't. | |
|---|---|---|---|
| 1. | Jeremiah McDonald,—contracted hand, | 15 | |
| 2. | James McMinus,—fractured leg, | 6 | |
| 3. | Jacob Writer,—amputated leg and arm, | 15 | |
| 4. | William Hommy,—fractured leg, | 15 | |
| 5. | William Brady,—amputated arm, | 2 | Artillery |
| 6. | George Walton,—amputated leg, | 15 | |
| 7. | John Leech,—wounded in the jaw, | 6 | |
| 8. | George H. Clair,—wounded in the foot, | 15 | |
| 9. | Abell Gussum,—amputated arm, | 21 | |
| 10. | Loran Pottle,—amputated arm, | 3 | Artillery |
| 11. | Ransum Mix,—amputated leg, | 6 | Artillery |
| 12. | William Cooney,—amputated leg, | 22 | |
| 13. | William Pinter,—wounded in the thigh and knee, | | Rifle corps. |
| 14. | Alexander Frazier,—wounded through the shoulder, | | Rifle corps. |
| 15. | Harvey Johnson—wounded through the knee, | 21 | |

| No. | Names. | Reg't. | |
|---|---|---|---|
| 16. | James Hull,—fractured arm, | 21 | |
| 17. | Christian Shoemaker,—wounded in the back, | 16 | |
| 18. | Elijah Blodgett,—wounded through the neck, | 23 | |
| 19. | John Lawless,—wounded back and arm, | 14 | |
| 20. | Robert Davis,—wounded in the arm, | 14 | |
| 21. | Henry Corpe,—wounded in the wrist, | 14 | |
| 22. | Adam Feather,—wounded in the hand, | 22 | |
| 23. | John King,—wounded in the thigh, | 2 | Dragoons. |
| 24. | James Andrews,—wounded in the leg and thigh, | 2 | " |
| 25. | Lewis Myers,—broken arm, | 2 | " |
| 26. | Henry Renchert,—wounded in the hand, | 13 | |
| 27. | James H. Nevers,—wounded in the thigh, | | Rifle Reg't |
| 28. | Guy L. Carpenter,—wounded in the shoulder, | | " |
| 29. | Edmund McKenny,—wounded thro' both thighs, | | " |
| 30. | And'w McGenly, wounded in thigh, and bad enough | 14 | |
| 31. | Jacob Dullas,—loss of eye sight (purblind.) | 15 | |
| 32. | Peter Robbins,—wounded stiff knee, | 2 | Dragoons. |
| 33. | Jonas Horrington,—wounded in the shoulder, | 2 | " |
| 34. | Thomas Hennessey,—wounded in the arm, | 2 | Artillery. |
| 35. | Sergeant Nichols,—wounded in the shoulder, | 3 | " |
| 36. | Sergeant Smith,—wounded thigh and shoulder, | 2 | " |
| 37. | Patrick Mooney,—amputated arm, | 6 | " |
| 38. | Timothy Ford,—wounded in the wrist, | 2 | " |
| 39. | Sergeant Norton,—amputated leg, | 14 | " |
| 40. | Thomas Broughton,—caries of the jaw bone, | 6 | " |
| 41. | Samuel Benedict,—amputated arm, | 23 | " |
| 42. | James Evens,—wounded leg, | 15 | |
| 43. | Sergeant Brown,—wounded in the thigh, | 22 | |
| 44. | David Parson,—amputated thigh, | | Vol. corps. |
| 45. | James Martial,—wounded, | 23 | |
| 46. | Wellehemius Slighter,—wounded, | " | |
| 47. | Lewis Rickmon, " | " | |
| 48. | Jonathan Patt, " | " | |
| 49. | Leban Cooper, " | " | |
| 50. | Daniel Brown, " | 13 | |
| 51. | John Rengleher, " | " | |
| 52. | Abel Parker, " | " | |
| 53. | Lewis Jones, " | " | |
| 54. | Eastman Corbin, " | 25 | |
| 55. | Waterman Horris, " | 1 | Artillery. |
| 56. | Frederick Campbell, " | | " |
| 57. | Gian Laxino, " | | " |
| 58. | Thomas Moore, " | | " |
| 59. | John Lesso, " | | " |
| 60. | Nicholas Welch, " | | " |
| 61. | Jeremiah Nicholas, " | 3 | Artillery. |
| 62. | Benjamin Shearman, " | 14 | |
| 63. | John Clemmons, " | | |

| No. | Names. | | Reg't. | |
|---|---|---|---|---|
| 64. | James Conner, | wounded | | |
| 65. | Allin Rell, | " | | |
| 66. | James Nicholas, | " | | |
| 67. | Joseph Webb, | " | 15 | |
| 68. | Samuel Palmer,—amputated thigh, | | 2 | Artillery. |
| 69. | John Loudeman,—wounded, | | | " |
| 70. | Joseph Davis, | " | | " |
| 71. | John Beard, | " loss of fingers, | | " |
| 72. | Thomas Borden,—wounded in the hand, | | 15 | " |
| 73. | William Pringle,—discharged. | | | |

Greenbush was reached only on the 5th of November, and all further campaigning for the season was lost to the writer. This disappointment being unavoidable, it was hoped to retrieve in the present campaign (1814) the advantages thus missed.

Two brigades of regulars, one battalion of artillery, and, to which may be added, a brigade of militia volunteers and of Indians, under General Peter B. Porter, constituted the force of our army, amounting in all to four thousand men, or near it. This statement might be superfluous, but as the American force never exceeded that during the most active period, it exhibits a relation of force with that of wounded, which is of some importance. The generation which saw that array is now well passed away. It is only a few months ago that we read, as one of the remarkable occurrences of the time, that one hundred and fifty of the veterans of the war of 1812, had assembled in New York on some public occasion.

To the existing generation, who know Buffalo as it is, to wit, a well built, dazzling and opulent city, of from fifty to sixty thousand souls, with all the luxuries of modern times in it, its state at that period may be almost incredible. It has now an extensive mole, with a spacious harbor, which witnesses the hourly arrival and departure of magnificent and enormous steamers. At that time its creek was its only harbor, and that exhibited merely a few batteaux lazily drawn up along its shore, or some few canoes of the Indian tribes living in its vicinity. The place had literally no harbor which could be called such; the great Erie Canal was simply in cogitation, and the term rail road was unintelligible. The whole number of human habitations in the form of buildings was from eighty to ninety, small for the most part, and unfinished; there was among them but one brick house,

known as Langdon's tavern, and the majority of the buildings were what were called shanties. They were very much in the style of hog pens, with board tops, and their destination was to retail whiskey to the soldiers.

It is true Buffalo had been entirely burned up the preceding winter, but its population before then scarcely exceeded a thousand people, and the houses were indifferent wooden structures, from one hundred to two hundred in number. A thick forest, with its primitive growth, almost unmolested, and impenetrable, except by a bad, miry road, led from Buffalo to Black Rock.

They were both villages, and in a state of rivalry, as far as such a thing could go. Black Rock had the advantage of being the natural harbor for the lower end of Lake Erie, but as its shores were within short cannon shot of the British batteries on the other side, it afforded no real protection, except from the lake storms, less injurious at that time than the showers of balls. It had about ten houses in it. Lewistown, as Dr. Mann says, was a handsome site for a town, "the name of which it only bears," for it consisted of a few *log* houses.

The Falls of Niagara were in a primeval state almost, the only marks of civilization being an old saw mill at Fort Schlosser.

While I am on this subject, the facility of getting from Philadelphia to Buffalo may amuse younger readers. By leaving Philadelphia at 8 o'clock A. M., of one day, New York could be reached the next day at 11 A. M., by diligent travel, and sleeping at New Brunswick. Now, five hours accomplish the same distance. By leaving New York at 5 o'clock P. M., in the best steamer, and going all night, Albany was reached at 7 P. M. the next day. It took eighteen hours of constant travelling to go from Albany to Utica, and three days of severe travelling to go from Utica to Buffalo, all of which was great expedition in its time. Thirty-six hours in all will now pass the traveller from Philadelphia to Buffalo, near six hundred miles; and if rail-way cars be comfortable to him, he may sleep away any amount of that time. Instead of having his joints, as formerly, half dislocated by log roads from Batavia to Buffalo, and his tranquillity interrupted by the frequent announcement,

"very miry here, gentlemen, be pleased to get out, unless you want to stick fast in the mud,"* he passes very rapidly from one place to the other.

These reminiscences, in marking the progress of our country, may surprise some of the younger members of the profession; they also have their use, though they may not be exactly surgical. They show the difficulties and expense of the transportation of troops and of munitions of war, to what was then an almost isolated and desolate frontier post.

In those days the communications of the country were so bad, that it is said every cannon conveyed from Albany to Sackett's Harbor, cost one thousand dollars, and that the "flour for General Harrison's army in the North-west, stood at one hundred dollars a barrel."†

The encampments of the army at Buffalo were broken up about the first day of July, 1814. Orders were issued for hospital preparations, a number of tents were left behind for future sick service, and for the sick of the regiments then on hand. The present Eagle Hotel and Rail Road Depot of Buffalo occupy the part of the city upon which the hospital was opened. The entire area allotted to it was to the west of the principal street, upon the first rise of ground there in ascending from the Creek. The space was about equal to that of the State House Square in Philadelphia, perhaps longer, in being more of an oblong.

While in the act of getting the hospital ready for service, it received a visit from General Scott, the universal favorite of the day, for his gallantry in the preceding campaign. As he rode through the hospital grounds, in his usual dashing style, with his aids, he said in passing, "Well, Doctor, but little work here as yet." "No, General, we are looking for some." "You will get it before long," was his reply, and off he careered with his staff.

* Dr. Mann, (Med. Sketches, p. 94,) says of this road: "From Batavia to the Niagara river, was a tedious journey of forty miles, for sick men, and these roads, bad at best," had been rendered almost impassable by heavy rains at the time he alludes to, October, 1813. Batavia then had forty houses.

† Ingersoll's Historical Sketch, &c., Vol. I., p. 283.

His promise was sufficiently kept, as the records of that celebrated period will show. It was the first time since the declaration of war that the tactics of an open field combat were tried. Line having been regularly displayed against line, each party directed by its special inspirations of skill and valor. There was, perhaps, never a campaign in which the belligerauts came to a better understanding of what they might expect in battle at each other's hands; and where the leaders, though under the excitement of a state of war, left off with more military respect for one another.

The operations commenced with the crossing of the Niagara river near its head, at Black Rock, by the American army, under the direction of Major General Brown. This was accomplished on the night of the second of July, and early the next morning, Fort Erie, nearly opposite the place of embarkation, was invested. A few scattering fires were directed from the Fort, and it surrendered in the afternoon of the third. In this affair only two or three soldiers were wounded, one in the knee, by a grape shot, and another in the head, by a buckshot.

The first one must have had his knee in a flexed position at the time of injury, judging from the course of the ball. The ball entered on the end of the right tibia, opposite its head; it did not penetrate or injure the bone, but glancing obliquely upwards, came out in the inside of the vastus internus, just above the knee.

From the nature of this wound, and the pain the patient experienced, an unfavorable result was looked for. The patient was dressed with a pledget of lint, and a bandage, on the field. The day afterwards, he was brought to the general hospital at Buffalo. I removed the first dressing, washed the wound well with soap and water, and applied a pledget of lint spread with simple cerate, and confined it with a bandage loosely applied. The use of ardent spirits, then universal, and really considered as the water of life, (aqua vitæ) was forbidden. He was ordered to live on thin soup and boiled rice, and to keep the limb undeviatingly in a straight position. On the fourth day after the injury, the pain of the limb increased, and a swelling of the joint was perceptible; the part was so extremely tender to the touch that the patient could scarcely bear the falling of

the water on it from a sponge used in dressing it. A saturnine poultice was then applied; he was bled to the amount of a pint, and, in order to counteract the irritation of the wound, which had kept him sleepless since its reception, an opiate was given. On the morning of the fifth day the pain had abated in a measure, the swelling was stationary, and a small quantity of pus was perceptible on the surface of the wound. The poultice was renewed, and the opiate at night. This plan of treatment assuaged the violent pain; the sore got into a healthy condition on the tenth day. The suppuration became very copious and healthy, and the tension of the knee removed; everything was then dispensed with, except the daily washing of the sore and a dressing of cerate.

The suppuration gradually diminished, the cicatrix contracted, the knee became flexible, and, on the fortieth day after the reception of the injury, he returned to his duties in the line, in consequence of a general order for all convalescents of the hospitals, able to bear arms, to repair immediately to their respective corps.

The other patient, who was wounded in the head, was a boy of fifteen, much esteemed in his company for his gallantry and attention to his duties. He being on a scouting party, employed in exploring the adjacent country, the party was met at night in the woods by another of our scouting parties on the same business. They mistook each other for the enemy, and a firing ensued accordingly, in which one on each side was wounded, before they discovered their mistake. This boy was brought to the hospital the next day; he was in a comatose state, attended with delirium; however, when spoken to, his attention could be directed to the person who addressed him. The wound was extremely small, in consequence of being inflicted by a buckshot, was situated on the right temple, and had been closed up by the tumefaction of its edges, so that only a small bloody scab about a quarter of an inch in diameter, was visible. The temple was much swollen; he complained of great pain in the right ear and back of his head. The wound being closed, prevented the probing of it.

A poultice of bread and water (it being impossible to obtain milk,) was applied and confined by a bandage.

The patient, from his restless and painful situation, did not allow this to remain more than an hour or two; it was frequently applied, and as often displaced; it was given up the next day and the wound dressed with cerate. Third day, the appearance of the wound was not much altered, it had discharged a little blood and serum; the patient still restless, and moaning through excess of agony; his pulse was frequent and feeble. An anodyne at night. A little nourishment of soup was occasionally put into his mouth. The fourth and fifth day he was in pretty much the same situation as in the preceding, only it was more difficult to obtain his attention, the delirium and comatose state having increased. Death put an end to his sufferings on the morning of the fifth day.

On examining the head, it was found that the buck-shot had passed through the temporal muscle and entered the cranium through the anterior angle of the right os parietale, just before the squamous suture, penetrated through the dura mater into the substance of the brain, and passed through the cortical part of it, not far from the right lateral verticle, and lodged above the tentorium on the same side.

From the first day of July we had been busily employed, under the direction of Dr. William Thomas, Hospital Surgeon, in erecting hospital tents, procuring bunks and straw, and making every arrangement for the reception of a large number of wounded.

On the fifth of July the battle of Chippewa was fought, in which the first brigade, under General Scott, gained a complete victory over the enemy under General Riall.

Many prisoners, and most of the enemy's seriously wounded, fell into our hands, which, added to our own wounded, gave the surgeons of the hospital department as much business as they could well attend to. Many operations were performed on the field of battle, and all the wounded dressed there.

The entire loss in missing, killed and wounded, of the Americans, was estimated at three hundred and twenty-eight; that of the British was said to be much larger, owing to the effectiveness of the American musketry. The battle being fought on the banks of the Niagara river, the wounded were brought up in boats to the general hospital at Buffalo.

They were conveyed from the boats on Buffalo creek, to the hospital, a distanee of three or four hundred yards, on blankets, the sides of which were nailed to poles nine or ten feet long. This formed an easy and convenient litter, by which four strong men could safely convey one wounded, without exposing him to the unspeakable pain from jolts, &c., which would be the inevitable consequence of transportation by wheel carriages. Besides this advantage of the litter, when the wounded soldier was to be placed on it, it was spread smoothly on the ground and he slipped gently on. It was then taken up carefully by the assistants and carried to the hospital, when the patient was either assigned at once to his tent, or placed on the hospital parade ground, as the convenience of dressing required. A litter thus constructed can be easily pulled away from under the patient without pain, and is, in that respect, much better than the brancard or the handbarrow.

The wounded on this occasion, for the most part, had this second dressing on the hospital parade ground; as they were brought up from the boats, and the weather was remarkably fine. They were then sent to their tents respectively.

The number placed immediately under my charge amounted to from sixty to seventy. After the battle of the 5th, a still more desperate battle, that of Bridgewater, was fought on the 25th. The details of this fight are of a most singular kind. It was intended by the British Generals, Drummond and Riall, for the 26th, but by accident came off on the 25th. It was characterized at almost every period by the desperation marking the storming and defence of a fortified post. The American force, it is believed, mustered not more than twenty-five hundred fighting men. The British force being recruited during the battle, exceeded ours. The battle lasted for five hours, and ended at midnight. The British Major General Drummond was severely wounded—the second in command, General Riall, was made prisoner. Major General Brown was badly wounded—General Scott also. General Ripley's hat was shot through. Every officer almost in the American lines bore marks of his participation in it, either by wounds actually received in his person or in his clothes. As I saw the remnants of this gallant force,

numerous were the cases of perforated hats—lacerated stocks—and gaping coats and vests; injuries which the difficulties of the times prevented their owners from readily repairing. Seventy-six officers, and six hundred and twenty-nine rank and file, were killed or wounded, of which number General Scott's brigade counted thirty-eight officers, and four hundred and sixty-eight rank and file. Of a force, then, of twenty-five hundred men, seven hundred and five were put *hors du combat* by the casualties of war, and it is thought that one hundred and fifty-five fell into the hands of the enemy.

The disorganization was so great from the loss of staff officers and soldiers, that it has been extremely difficult ever since to analyze this battle and show its precise results. The account published by the Hon. Charles J. Ingersoll,* corresponds more nearly with the camp rumors and conversations of the time, than any thing else I have seen, and it has perhaps the additional advantage of recurrence to original documents in the War Office, and of personal inquiry from the leaders on this celebrated occasion. It may here be suggested, should this medical sketch excite further interest as regards military matters, the same work may be very advantageously studied concerning the other operations on this frontier during the campaign of 1814. As to its precise accuracy, a verdict from other quarters will have more authority. One might suppose that in a military organization, every thing may be told with absolute accuracy, and this will be the case in a state of peace. But the tumult, confusion, and hurry of real military operations, and the want of even common personal or mechanical conveniences to make out reports and prepare records, produce to some extent an unavoidable inaccuracy. No man can see all at once even over a small space; he is therefore under the necessity of using the eyes and the testimony of others in the same difficulty with himself, and consequently aggregate results are the nearest approach to absolute facts.

Even in a military hospital, on such occasions, it is impossible to keep pace with the events in each ward or division of it. Much passes without being known at all—and much with being only loosely known. There are many occasions or periods in

* Historical Sketch of Second War, &c., chap. iv., Philadelphia, 1849.

which the mind is constantly engaged with present matters, and in thinking forwards; instead of thinking backwards, so as to collect, to compare, and to remember. A short lapse of time will obscure an impression or even efface it from the mind, and the advantage of it is thus sacrificed.

The British lost eight hundred and seventy-eight in killed, missing and wounded. All our serious cases of wounds were brought into the hospital at Buffalo; the lighter cases were left with the regimental hospitals. There were some few, but not many of the British wounded, taken prisoners, by no means so many as at Chippewa. Each side sustained fully its military renown, and each side claimed the victory. The regiments of the British line engaged in it have it still inscribed on their colors, according to the practice of their army on such occasions. By some it was considered as a drawn battle, and is still a subject of discussion in that respect in histories of that period. This battle was one of the most destructive field fights on record, for the numbers engaged.*

It crowded our hospitals so completely, that the attention of the surgeons was required unremittingly from early in the morning till night, besides the constant sick calls at night. At one time the author had the sole attendance and dressing of one hundred and seventy-three sick and wounded. My fingers became so sore from incessant dabbling in water and in pus, that I could seize nothing without pain, and was constantly liable to let articles fall, from the sudden twinges of agony in touching them.

The American army was so weakened by the battles of the 5th and of the 25th, that it retreated to Fort Erie, and there began to fortify itself. The British army, in the mean time, was strongly reinforced, and moving up began their operations against the position.

* Losses of opponents and their force on the field of battle, are, for the most part, conjectural, or founded upon reports through defective channels of information. Generally, losses on the hostile side, as well as amounts of force, are overrated on each side. The private official accounts rendered to the governments respectively, are the most accurate, because errors here might produce the most serious calamities in further operations.

Our pressure of hospital business continued till August the fourth, when an attack at Black Rock by a large force of the enemy, in view of capturing the munitions at Buffalo and the troops in the hospital, occasioned a sudden and general dispersion. Our requisitions for hospital rations for some days before this affair had been at eleven hundred, according to the steward's report.

The precise number of the wounded patients at this time, I have preserved no memorandum of, but it included a very large amount, as we had on hand those of both armies, somewhat intermixed; but the body of the British soldiers to themselves, in one division of the hospital. The wounded officers were generally quartered in the town, the soldiers being in tents.

The attack was made by twelve hundred men under Col. Tucker, and their operations were defeated by the gallantry of two companies of Riflemen under Major Morgan, who, having put up a breastwork of logs near the Conjocketa creek, a little below Black Rock, and removed the planks from the bridge crossing the creek, made his defence good at that point by cutting down the head of the British column as fast as it showed itself near the bridge. The fire was so destructive that the column would have been exterminated if it had persisted in its advance.

The danger of capture was so imminent, that while the action was in progress many of the patients of our hospital, who were capable of shifting for themselves, dispersed into the country, and others were removed to Williamsville, a small town of two or three hundred inhabitants, eleven miles in the interior.

At this place a general hospital was opened, and the writer placed in charge of the Buffalo one as a receiving hospital for the army now closely hemmed in at Fort Erie. The hospital at Williamsville had for its chief officers Drs. Ezek. Bull, W. Thomas, and T. Lovell. The latter was afterwards Surgeon General of the army, and had distinguished himself by his skill and zeal in the campaign of 1813, as well as in 1814, now going on. The hospital at Buffalo was directed to retain the most severe cases of wounds, and to send all others forward to the interior one, and to pursue this course for the remainder of the campaign. My care for the time was thus reduced to eighty or ninety, whose condition forbade removal. A phy-

sician in private practice in Buffalo, Dr. Coltrin, was allowed me as an assistant. He had been the partner in practice with Dr. Cyrenus Chapin, the oldest physician of the place. Dr. Chapin had been equally distinguished in his profession and by a military career. In the latter, he was Colonel of a regiment of volunteers, and had as such accomplished several remarkable feats of bravery, by his resistance to frontier attacks, by his hostile incursions into Canada, and by a singular re-capture of himself on Lake Ontario in an open boat, by rising, with some other American prisoners, upon his guard, and bringing boat and all into the American territory.

On the 15th of August, General Gaines being in command of the American forces, a general assault was made upon our works by the British General Drummond, the details of which are among the most stirring of the entire war. The British advancing in three columns before daybreak, two of these columns were repulsed with great slaughter. The third column, more successful, stormed the Fort, and while contending on a bastion for an hour for the final mastery, a magazine near it exploded and threw the column into the air; this made the repulse decisive. Nine hundred and fifty men of the British, Mr. Ingersoll says, were killed, wounded, and made prisoners, about one-third of their entire force. The American loss was but eighty-four. It was one of the most brilliant events of the campaign, and gave imperishable renown to the General in command. The conflict lasted about three hours.

Those killed at once by the explosion, were estimated at from two to three hundred. On the 16th the survivors of the wounded, amounting to one hundred and forty-three, were brought from the Fort to our receiving hospital at Buffalo, and shortly afterwards ordered to the Williamsville hospital. They were truly most pitiable spectacles of the havoc of such a battle. Some blackened over the whole face with the explosion of the powder, and their heads swollen to two sizes; some with eyes burned out; in others, limbs mangled and perforated by musket balls, with their clothes torn from their scarified backs, &c., &c. There was scarcely a detail of wound which was not exemplified among them. This was the third great battle fought

in fifty days from the opening of the campaign, and it alone was enough to show the horrors of war. It would be impossible to recall the precise impressions of that period, the military man sees in such events the steps of his glory, but the surgeon has only the impression of the woes of war; of affrighted women and children leaving their homes precipitately to escape the bloody fury of an enraged enemy with his savage allies; he hears only the groans of the wounded, sees the horrid mutilation of their bodies, their want of comfortable accommodations and provisions, and the imperfect attendance from press of business. Since July the 2d, our hospital had been recruited by two pitched battles, one general assault upon our position at Fort Erie, by the defence of Black Rock under Major Morgan, and by a skirmishing, bombarding and cannonading, which had scarcely the interval of an hour from day to day.

These operations continued with but little interruption till Sept. 17th, when a sortie was made from Fort Erie. The besiegers were driven off from their works, and their cannon spiked or rendered useless, and three hundred and eighty prisoners were brought in. The American loss was five hundred and twenty-seven in killed, wounded and missing; the British loss six hundred and nine. Mr. Ingersoll says one thousand, nearly a fourth of their army. The sortie was a blow of consummate skill and daring, attended with the most heroic feats, in which General Peter B. Porter bore a conspicuous part. General Jessup considered it the most splendid achievement of the campaign.* This feat established the military fame of General Brown, who had resumed the command; and brought the campaign virtually to a close, as the subsequent part of it was comparatively uninteresting.

A final termination was put to the campaign on Nov. 5th, by the complete evacuation and blowing up of Fort Erie by the Americans. Offensive operations had now ceased to be thought of from the vast accession to the British forces; and the attention of government was directed exclusively to the making our own territory secure. The British Commissioners at Ghent, at this period, had commenced with the prefatory and absolute demand,

*See for a detail of it, Ingersoll, loc. cit. p. 151.

that an immense belt of territory, coterminous with our northern frontier of lakes and rivers, must be given up, all Michigan, all Illinois, one third of Ohio, and the navigation to the ocean of the Mississippi. Other terms equally humiliating were mixed up with these. Washington had been captured, and everything indicated a recurrence of the scenes of the American Revolution. The government proposed a conscription of one hundred thousand men to begin with for the next campaign. Happily more moderate views finally dictated the terms of peace, and the victory of New Orleans under General Jackson ratified them in the judgment of both parties.

After the blowing up of Fort Erie, by the American garrison consisting of Col. Hindman's command of Artillerists, the author was placed in charge of them, with great pleasure to himself, owing to the high renown they had acquired. This battalion had so distinguished itself during the whole of the campaign, as to attract even the commendation of the British officers, who had got the impression that it was under the direction of the most experienced French artillerists. They were quite surprised on learning that the officers were all Americans, and none of them beyond thirty years of age.

On the 23d of December the General Hospital was closed at Buffalo, and the patients sent to Williamsville. Being thus freed, my service for that campaign closed, and I left the station for Washington on the 24th, having in hopes promotion for the next campaign, as we then knew nothing of the pacific tone which the negotiations at Ghent had assumed.

From the preceding narrative, it will be inferred that every description of wound was to be met with, as from the musket ball, from the grape shot, cannon ball, fragments of shell—in fact all the missiles used in warfare. There were but few instances on either side of the bayonet wounds, as troops seldom close so much as to inflict them.

Men who have witnessed the conduct of others during protracted scenes of danger, are struck with the great disregard of life which seems to infuse itself into their habits. Man is the only animal who, from being naturally cowardly and afraid of pain and danger, gets so as to disregard them both. Dr. Mann (Medical Sketches, p. 175,) has remarked justly, that "long s'

stinence, watchings and unremitted hardships, soon break down not only the spirits but strength of an army. But when well fed, the men cheerfully endure fatigue and cold, and expose themselves to the most threatening dangers, regardless of consequences. Familiar with death, the soldier soon forgets that the feeling of horror was once attached to its name. The love of country, honor, the pride of conquest, incite him to acts of heroism. When duty calls to confront the enemy, he obeys the summons with the same alacrity as when invited by the alluring voice of pleasure to his amusements." Even female followers of an army fall into this moed. Among us was one from Kentucky, remarkable for her height, muscular figure, for the loss of one eye, and for her volubility in oaths and queer modes of execration when jeered at or incensed. In the preceding year, her father and brother had been among the victims of a celebrated but execrable massacre at the River Raisin, of which she was witness. Storming with feelings of revenge, at the opening of this campaign, Betsey, dressed as a soldier, entered the ranks, and at the battle of Chippewa executed her firing with the precision of one of the line. Her company was much exposed, and her immediate comrades shot down; she nevertheless continued in line, until the Captain told her it was time to leave, that the wounded men required water and attentions, and that she had better serve them. She obeyed, came into Hospital with them, and was one of the most faithful and kind of nurses, notwithstanding her recklessness of conduct in other respects.

I remember, one day, in making my hospital rounds, a patient just arrived presented an amputated forearm, and in doing so could scarcely restrain a broad laugh; the titter was constantly on his face. "What's the matter? this does not strike me as a subject of laughter." "It is not, Doctor, but excuse me, I lost my arm in so funny a way, that I still laugh, whenever I look at it." "What way." "Our first Sergeant wanted shaving, and got me to attend to it, as I am a Corporal. We went out together in front of his tent, I had lathered him, took him by the nose, and was just about applying the razor, when a cannon ball came, and that was the last I saw of his head and of my hand. Excuse me, doctor, for laughing so; I never saw such a thing before." This occurred during the siege of Fort Erie.

Out of barracks it is common for messes of soldiers to cook at fire places made of two banks of turf, crossing at right angles like the ridges of the occipital bone. When not on parade, these places are the resort of groups of soldiers. On an occasion of the kind, one of the soldiers, standing on one foot, a cannon ball struck him on the head, and in doing so gave a whirl to the whole body upon the leg as he stood; the other leg flew out, as the headless trunk turned, and it upset a camp kettle of soup in the process of cooking. The soldier to whom it belonged was quite indignant at the loss, (provisions were then very scarce at the Fort,) and in his wrath he ejaculated, "could you not have lost your head without kicking over my soup?"

A patient who had lost his entire scalp to a level with the top of his ears, was the subject of unmitigated jeers by his comrades. Owing to the profusion of the suppuration, he was brought out daily upon the parade in front of the hospital tent, to have his wound washed and dressed. As there was some degree of regularity in the hour, it constantly attracted a circle of the more lightly wounded. It appeared that he had met with his accident from dropping behind to pick his flint, as he said, but it occurred as his regiment was moving forward into action, and the belief was that his motive was to save himself, instead of improving his flint. A party of hostile Indians on scout in the rear of the regiment, rushed upon him, he was felled with the butt of a tomahawk, and his scalp immediately stripped off in a large circular cut. He would after this have got the *coup de grace* from the edge of the tomahawk, but he feigned death; at this critical moment a scouting party of Americans fired upon the band of Indians, and they scampered away.

The battle being over, the wounded of the regiment were surprised to find their comrade alive, as he was considered a victim to the Indians. But the whole affair being now understood, it was a constant subject of merriment as his denuded cranium was exposed for the surgical dressing. One would ask him who cut his hair; another, how long it took; another declared that if the Indians were such close cutters, they should never touch his hair. And so it went on from mouth to mouth, each soldier trying his ingenuity at a question, as to what the wounded man had said on the occasion, how he managed it, and what the Indians said.

The crowd of wounded brought in by the field of Bridgewater reduced unavoidably attentions to individuals. The most possible was done, but it did not come up to the point. Under these circumstances many soldiers were treated in the outskirts of the hospital, by their wives or females having an attachment to them. With such assiduities, recoveries took place which would scarcely have followed in the ordinary hospital practice. A boy shot in the forehead, with the ball penetrating to the back of the neck along the base of the face, whom I had seen on his first arrival and dressed, and given up for a fatal case, I was pleasantly surprised some weeks after in finding in a state of convalescence. A soldier, shot through the lungs badly, was saved in the same way. So much for assiduous nursing, congenial food, cleanliness and good poultices.

(To be continued.)

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*A History of the Epidemic Cholera, which prevailed, during the summer of* 1852, *at Chambersburg, Pa.* By A. H. Senseny, M. D.

It is proposed, in the present communication, to give a brief history of the *epidemic* which prevailed in Chambersburg and its vicinity from the 15th of July, 1852, until the 31st of October of the same year. The unusual length of time the disease prevailed, and its extreme virulence of character, seem to demand that all the facts connected with its visitation and prevalence be placed upon record, and to justify the present undertaking.

Cholera, as an epidemic, or in a sporadic form, has made its appearance so frequently and so extensively in many parts of our country, that almost every physician of any experience is more or less acquainted with its nature; but as a great difference of opinion exists among physicians as to the predisposing cause of the disease, and the manner in which it is transmitted from place to place, together with other particulars connected with its appearance in one spot in preference to another, a few preliminary observations may not be deemed irrelevant or improper.

In the first place, I would give the reader an account of the weather during a few months immediately preceding the breaking out of the cholera, and also touch upon the character of the diseases occurring during the same period. Throughout the month of March there was little clear weather; it either snowed, rained, or was cloudy. The same may be said of the month of April. The principal diseases throughout these two months were pneumonic affections, inflammatory rheumatism, and some scattered cases of typhoid fever. During June, the weather was very unstable—only seven clear days intermingled with those that were either showery, cloudy or windy. Diarrhœa, and some few sporadic cases of dysentery, made their appearance during this month. From the 1st to the 13th of July it was dry, very hot, and no rain. On the 15th of this month we had the first case of cholera; the weather was then hazy and warm. From this period until the first of October, clouds, showers and warmth predominated. As I may observe in another part of this communication, vegetation was exccedingly rank and luxuriant, not only during the prevalence of the epidemic, but also antecedent to its visitation. Assuming, therefore, that certain degrees of heat and moisture, acting upon perishable matter, produce that state of atmosphere which is the predisposing cause of cholera, it will not be an easy matter to determine why one season should develope the disease, whilst another, precisely similar in all its characteristics, should be marked with a high degree of health, or, at least, free from any of those diseases approximating to cholera. In the description hereafter given of the locality of Chambersburg, mention will be made of *drains* and *sewers*, which might seem to act as auxiliary causes in the production of the disease—yet here the same difficulty meets us, for these constructions have been in existence for more than twenty-five years. In 1832, when the cholera first visited Chambersburg, this place was the great thoroughfare of travel between Philadelphia and Pittsburg, but since the opening of the Central railroad all that travel has been removed. The place may be regarded, therefore, as rather isolated in its situation, and enjoying for years a high character for health and salubrity.

These difficulties, which we encounter in endeavouring to discover any local agent, are calculated to dishearten the physician

and to deter him from a close investigation. That it is a vitiated and poisonous state of the atmosphere which induces the disease there can be but little doubt, and that persons badly fed and meanly lodged, and those having debilitated constitutions, are more susceptible to the *poison* than those in vigorous health and living in ease and comfort, are also indisputable truths. But why this miasmatic atmosphere should affect in one place and not in another—should bring sickness and death in one particular season and not in another similar to it—should carry off one individual of a weak constitution and pass by his neighbor similarly affected—are questions to answer which we must acknowledge ourselves utterly incompetent. We must content ourselves with regarding them as among the great *arcana* of nature, the solution of which, perhaps, is reserved for future generations. The wisdom of Providence is manifested in his works, and may we not suppose that in this matter, as in many others, perfect *knowledge* would not contribute to our happiness. We daily see things around us which we do not comprehend, yet we doubt not of their existence, or of the laws by which they are governed. May it not be so with respect to various diseases which seize upon and affect the human system. The effect we see and know, but the cause lies beyond our vision and comprehension. It was remarked, during the prevalence of the great plague in London, that the weather was singularly fine. The sun shone with unusual brilliancy and splendor, whilst the atmosphere appeared pure and lucent. Yet who doubts that the seeds of infection and death were floating densely through the pestiferous air, invisible to mortal vision, and beyond all scientific investigation?

Before proceeding to the history of this epidemic, it may be proper to give a brief description of the locality of Chambersburg, and of its immediate neighborhood, so as to furnish data for those who may desire to speculate about the local causes which may have developed the disease; as well as afford information to others, desirous of investigating fully and satisfactorily, every thing connected with the existence and prevalence of this fearful malady.

Chambersburg, the judicial seat of Franklin County, Pennsylvania, is principally situated on the bank of the Conecocheague Creek (a small stream meandering southwardly into the Potomac,)

at the point where it receives the waters of the Falling Spring. The creek has its sources in the South Mountain—running about ten miles east of the town—which circumstance renders its waters somewhat turbid and discolored by the time they reach Chambersburg: whilst the Falling Spring, taking its rise from pure and clear springs, but a few miles from the town—pours its tribute into the Conecocheague almost as fresh and translucent as when it receives it from the fountain-head. A short distance below the junction of these streams and nearly opposite the centre of the town, a dam has been constructed for the purpose of carrying on "Lemno's Factory." About one fourth of a mile lower down, another dam has been formed to serve the purpose of a common grist mill. To the north of the town across the creek, and to the east upon the spring, many other *dams* have been erected for manufacturing purposes. The principal streets in Chambersburg run parallel with the creek. These are crossed at right angles by four or five others. From the natural situation of the place all these streets are admirably well drained. That part of the town, on the west bank of the creek, lies on the side of a gently sloping hill, becoming gradually more precipitous as you advance westwardly. The basis of this section is slate intermixed with tumbling stone. The water used for domestic purposes, in this neighborhood is soft and clear. On the eastern bank of the creek, where the main portion of the town is located, the soil is limestone, covered with a stiff, red clay, overlaid with a stratum of dark rich earth. There are no marshes or ponds, of any account in the vicinity. Great attention has been paid to grading the streets and alleys—and a sewer has been built, leading from Main street to the creek—a distance of 500 feet, which carries off all the filth and waste water from the eastern and central parts of the town. It must be remarked, however, that this beneficial construction emits, sometimes during the months of July and August, an unpleasant effluvium. Lime, during the past season, was plentifully distributed—as indeed it has been during the summer months for several years past.

I have been thus particular in these details, as, during the progress of my remarks, I shall occasionally allude to them. Besides, it is my design, in this communication, simply to state all the facts connected with the locality of the place and neighbor-

hood—the incidents of the weather—heat and moisture, leaving it for those who are fond of investigating cause and effect to draw their own conclusions.

I now subjoin a tabular register of each day's observation, giving a condensed view of the greatest heat, with other meteorological notices, commencing with April and ending with September, 1852.

*April.* Six days, thermometer at and above 55°; highest 62°. Two slight snows in this month.

The whole of this month nearly either rainy or cloudy, average height of thermometer 50°.

*May.* Fourteen days, thermometer stood at 70° and upwards—highest 82°. From first to sixth, clear and windy; remainder of the month either cloudy or rainy.

*June.* Twelve days, thermometer stood at 80° and upwards—highest 90°. Seven days clear, remainder showery, cloudy, or windy.

*July.* Twenty-five days, thermometer stood at 80° and upwards—highest 98°. First, cloudy and showery. From this to the 13th no rain, but cloudy and windy. Balance of the month either cloudy or showery.

*August.* Nine days, thermometer stood at 80° and upwards—highest 86°. Clouds and showers characterized the greater part of this month. But four days that can properly be styled *clear*; average height of thermometer 76°.

*September.* Five days, thermometer at 80° and upwards, highest 84°. Fourteen days, thermometer at 70° and upwards—average 74°. A greater part of the month either cloudy or rainy—with more clear days, however, than in August.

It will be observed, by inspecting the foregoing register, that clouds and rain predominated during the past summer months, with a higher degree of heat, so that the season may emphatically be denominated a *wet* one. As a consequence vegetation of all kinds abounded. Indeed, the luxuriance and redundancy of the vegetable kingdom not only attracted the attention of close observers, but was a subject of universal observation. Even upon our poorest slate farms, where the crops are most easily affected by any derangement of the weather, it was remarked that all the various crops were unusually abundant. It will also

be observed, that a drought of thirteen days preceded the first appearance of the cholera, though a heavy rain fell a day or two immediately before its breaking out on the 15th July.

The first case of the epidemic made its appearance in Main street, near the centre of the town, and about twenty paces from the entrance of the public sewer. It occurred on the fifteenth of July, and, what is singular, in the very room in which it made its appearance in 1832. Both the cases proved fatal. During this visitation the patient was seized in the early part of the evening with diarrhœa, for which his family physician prescribed. About the turn of the night, vomiting came on, and by four o'clock in morning he was collapsed. His appearance was now entirely changed, presenting a livid hue, with a cold clammy skin, and a feeble pulse; at noon he died. On the evening of the same day a lady in the adjoining house was taken with diarrhœa. About four o'clock in the morning I was called to see her. I found her pulse nearly extinct, with a cold clammy feeling of the skin, her lips livid, tongue cold, eyes sunk deep in their sockets, in short her whole system was shrunken and cadaverous. She was bathed in a cold perspiration, her fingers shrivelled, "white and corrugated like those of a washerwoman after a hard day's work." Her voice was husky, but her mind sound and unimpaired midst these ruins of organic life. She continued in this state until evening, when she expired.

The next case occurred on the 26th. This was that of an old man, yet he lingered several hours longer than either of those I have described. From this date until the 31st, no deaths occurred. On the latter day there were five deaths from cholera, all differing in complexion. Two of these cases were stout, healthy and temperate men—one, a widowed lady living retired and in easy circumstances—one, a young colored girl, and an intemperate colored man. One of these was distinguished by the length of time the cramps and pains continued. Up to a short time before her death, she gave utterance to violent screams, attesting her great agony and suffering. From the 2d until the 12th of August sixteen deaths were registered—all of this disease, varying somewhat in character and duration. A remark may here be made as to these sixteen cases, and applied to any period throughout the continuance of the epidemic, viz: That the fatal pest seemed

to attack at random—bringing both young and old, temperate and intemperate—the man enjoying apparently vigorous health, and him of a weakly constitution, all under its baneful influence. From the 12th to the 20th there were eleven cases. Most of these were colored persons, and some of very loose habits.

From this date until the 30th, a suspension of the epidemic took place. No case occurred, and the citizens were flattering themselves that the danger was passed, and were congratulating each other upon their escape from its ravages, when suddenly, upon the 30th, it re-appeared, and continued its course with recruited vigor. During the month of September there were thirty-five deaths. It was in this month that the epidemic assumed its most aggravated form. The cases generally were more rapid, terminating in from six to eight hours. In one case that occurred on the 17th, death ensued in five hours from the time of attack. In another case, that of a stout and healthy man, who died in six hours after being attacked, I observed a peculiar twitching and muscular motion of the arms and legs, about thirty minutes after he had ceased to breathe. The urinary secretion in nearly all of the cases was diminished, and in many entirely suppressed. Symptoms of greater gravity characterized the disease as it progressed. The unmistakeable cholera countenance made its appearance simultaneously with the attack. The eyes at once became sunken in their orbits, blood-shotten, and surrounded by a black circle. The lips were livid—cramps of the extremities and abdomen, so harrowing in some of the first cases, became slight and feeble. So powerful was the poison that the system was at once depressed beyond reaction. The respiration was quick and difficult—pulse rapid—varying from 100 to 120. In some few cases there was an apparent suspension, which, however, lasted for a short time only. In the course of a few hours, the disease resumed its fatal progression. With the small number of patients who recovered after collapse had taken place, the symptons continued gradually to improve. The respiration became slow, the pulse feeble and slow, and the thirst less intense. The convalescence, however, was tedious, requiring several days before they could leave their beds.

Several cases occurred during the month of October, but at

longer intervals. The weather, however, was unusually warm for the season, and it was not until the frosts of November made their appearance that it entirely disappeared.

In giving this account of the epidemic, I have confined myself to the town of Chambersburg. Many cases occurred in the adjoining districts, some of which I attended; but I have not thought proper to connect their history with those of this place, though I have included them in giving the gross number of deaths.

After having described the locality of the operation of this erratic pest—given an account of the state of the weather antecedent to its appearance and during its prevalence—together with a history of the cases, it may not be amiss to make a few remarks relative to the *treatment* pursued. And here I find myself at a loss, for I can necessarily only speak of my own mode of procedure. I consulted, however, with some of my brother physicians, and I am happy to state that I found their observations, experience, and manner of treatment, to coincide generally with my own.

As it has already been remarked, cholera presents several stages in its progress, The various phenomena of the disease had to be encountered with various remedies, adapted to that particular stage. If called in when the first symptoms were prevailing, the grand object was to arrest the diarrhœa. The agents used for this purpose were opium and its preparations, sugar of lead and other powerful astringents. The onset of the attack, generally, was easily checked, and, if prudently watched, its further progress was prevented. Many, however, were not alarmed by the simple alvine evacuations, particularly when unaccompanied by pain, and thus carelessly suffered the insidious foe to enter the citadel, before aroused to a true sense of their danger. In most cases that I attended, such was the case; diarrhœa had been permitted to continue—sometimes for days—before they thought of calling in medical aid.

During the continuance of the diarrhœa, purgatives of any kind, even laxatives, were found to aggravate the disease. Calomel, which has been recommended by so many writers as a *Sampsonian* remedy, I found invariably to accelerate the collapse, even when administered in the minutest portions. When

I found the patient approximating to this fatal stage of the disease, and when actually fallen into it, recourse was had to still more active remedies. In addition to the medicines already mentioned, (which were continued throughout the entire course,) recourse was had to ammonia, camphor, brandy, wine and other stimulants, to sustain the sinking powers of the system. Hot outward applications, sinapisms to the stomach and extremities, stimulating liniments, accompanied with friction, were added to the number of remedial agents. If, happily, this active manner of treatment succeeded in arousing the collapsed patient and arresting its further progress, then small doses of calomel or blue mass, combined with small portions of opium to restrain its operation, were found serviceable in restoring the liver to its proper functions. The greatest care, however, had to be given to their diet, for the slightest deviation from the strictest rule, invariably endangered a relapse. But the inveterate nature of the disease most frequently thwarted the most anxious attention and watchful care, and when the too sanguine physician imagined that he had succeeded in effecting a cure, he suddenly found himself deprived of the object of his deepest solicitude. The fell monster seemed to take delight in baffling the most active efforts and eager expectations, and moved from victim to victim with a tenacity of purpose equalled only by his almost unrivalled success.

*Remarks.*—The symptoms of all these cases were identical in character with those of the disease in this country in 1832. The most perceptible difference between the cases which I have mentioned, and those which occurred during its first visitation, consisted in the latter being more aggravated and fatal. In most cases during the present epidemic, a few hours sufficed to determine the fate of the victim. So rapid and vigorous were the attacks of the disease in many cases, that, notwithstanding the general alarm upon the subject—and the eager anxiety to procure medical aid as speedily as possible, frequently before assistance could arrive, the first stage of collapse had taken place. In a few cases that I attended, even when called to the patient when first attacked, the disease continued to progress with such frightful rapidity that the fatal collapse stared you in the face in the midst of all the appliances and medical means which had

proved beneficial to others. My experience corroborates what has been remarked by nearly every medical writer upon this subject, viz: that when the patient once passes into the state of collapse, very little can be done for him. Death almost universally ensues.

The unmistakeable identity which connects the cases of the past season with those of 1832, leads us to inquire respecting the origin of this disease, and why the atmosphere of Chambersburg should, apparently, present a congenial field for its operations. This question affords ample scope for philosophical investigation. I shall confine myself, as already intimated, to a simple statement of facts.

The first cases of cholera in 1832 occurred immediately after a heavy fall of rain, which had been preceded by several weeks of dry weather. It will be seen by reference to the accompanying register that the appearance of this disease on the 15th of July last was ushered in by a copious shower of rain. During the two previous weeks the weather was very dry and hot. The same remark is applicable to its intermission and re-appearance during August and September. On the 18th and 19th of October, some cases occurred, all of which proved fatal. From this until the 30th, the weather was dry, warm and clear. On that day it rained heavily, and on the 31st, two cases of cholera made their appearance, which, however, yielded to medicine.

Whether these changes in the atmosphere had anything to do in developing the disease, or were simply remarkable coincidences, I will not pretend to decide, leaving it for those more conversant with atmospheric mutations to form an opinion. I am inclined, however, to believe that a vitiated air, acted upon by some sudden and exciting cause, is the principal agent in the production of certain diseases and their concomitant consequences.

In view, then, of all the facts and circumstances connected with the existence of the late epidemic in Chambersburg, must we not regard it as somewhat remarkable that a town, hitherto celebrated for the high degree of health enjoyed by its inhabitants, should suddenly, after an interval of twenty years, be visited by a scourge so formidable and deadly in its character? A town, too, in which the civil authorities had taken the precau-

tion to have all the streets and alleys thoroughly cleaned and limed, in which an unusual degree of care was bestowed upon the dwellings of the citizens, and the quality and kind of their food—should be so severely attacked and for such a length of time, is one of those mysterious movements in nature for which which it is impossible to account. More than one hundred and thirty persons were swept away in the town and neighborhood by this terrible pestilence, without any perceptible difference between this season and many preceding ones, and, with the exception of the town of Mifflin, not another place in the State was similarly affected.

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*Adhesive Plaster, as a valuable Constituent in the composition of various Apparatus used in Surgery.* By D. GILBERT, M. D. Professor of Surgery in the Medical Department of Pennsylvania College.

The article in the last number of the Examiner, from the pen of Professor Gross, of Louisville, Ky., on the uses of *adhesive plaster*, is valuable not only on account of the information which it embodies, but in calling the attention of the profession to the subject and eliciting its experience. The introduction of the machine-spread plaster is comparatively recent, and hence, in all probability, many valuable uses to which its convenient form has adapted it in the hands of numerous practitioners, have not yet been made public. Dr. Gross alludes to published reports of its use in the treatment of compound fractures of the bones of the leg and of fracture of the clavicle, as confirmatory of its value; and very clearly proves that the credit of first introducing the plaster, as an extending medium, is due to Dr. Swift, of Easton. Having used adhesive plaster very extensively for surgical purposes other than as a mere retentive means in wounds, I propose to furnish to the profession some of the most valuable uses to which I have applied it.

1. As Dr. Gross had evidently not read my report of the use of adhesive plaster as a *counter-extending bandage* in fractures of the thigh, as published in the *American Journal of the Medical Sciences* for January, 1851, p. 71, I infer that my ac-

count of its use may have escaped the notice of others; I would, therefore, here ask attention to what is there stated. In addition, I think it proper to state, that since then I have treated two other cases of fracture of the thigh with equal success, by means of the adhesive counter-extending bandages. In neither case was the pressure of the counter-extending bandages complained of, although the tension was kept up during the entire period of treatment. One re-application of the plaster bandages was sufficient. There was no perceptible shortening, and the undisturbed state of the fractures contributed doubtless to a more effectual and speedy union than is usually had by the ordinary treatment.

2. *Morbus Coxarius.*—In the early stages of this disease an entire investment of the parts usually covered by the splint, has been followed, in my hands, with the most pleasing results. The plaster is cut into strips of convenient length and breadth, and applied diagonally, overlapping each other, and then another layer crossing the strips of the first at salient angles. Additional strips may be applied from the pelvis to the thigh and leg, so as to restrain motion. Over this, in the cases of children, a splint made of starch and roller, fullers' boards, or any of the moulding tablets in use, may be worn to insure greater quiescence to the joint. Besides keeping the parts immoveable, the plaster acts as a mild counter-irritant, affords equable pressure, and reduces the swelling as in orchitis.

3. *Club Foot.*—In the treatment of the various degrees of varus, I use the following apparatus:

*a.* A steel sole adapted to the foot, having a process extending half an inch horizontally from the outer edge of the sole, and then rising one inch perpendicularly.

*b.* A steel leg piece, with half a circle at its upper extremity, which should be padded on the inside, by which it is attached to the leg below the knee, with buckle and strap. The process of the sole is constructed so as to receive the lower end of the leg-piece, to which it is fastened by a screw. The leg-piece has a joint opposite to the ankle, which is controlled by a screw.

*c.* A piece of adhesive plaster two and a half times the length of the foot, the width about one-fourth of the length of the plaster. Cut two-thirds of the width of this piece of plaster

into strips transversely, leaving them attached to each other by the remaining third.

*Application.*—After cutting *all the tendons* at fault, at one operation, by subcutaneous section, bring the foot into its new position, and whilst held there by an assistant, apply the steel sole, and give it in charge of an assistant; then take the adhesive plaster, and apply the centre (or bight) of the uncut third to the heel, so that this is well caught, and then along each side of the foot to the dorsum, crossing over the anterior extremity of the middle metatarsal bone; carrying each extremity forward and passing it over the sides of the toes, down to the anterior extremity of the sole. The lateral strips are now drawn firmly over the sides of the foot, and made to overlap each other on the sole, fixing this firmly to the foot. The adhesive plaster and sole, thus applied, cover the foot to the extent usually occupied by a low quartered slipper. The leg-piece is next attached to the perpendicular part of the process of the sole, and buckled to the leg below the knee. Additional adhesive strips may now be applied over the foot, and extended down to the sole, so as to keep the foot firmly fixed in its new position. The foot is then elevated for a few days, and cold water may be applied, if necessary, to keep down tumefaction or inflammation. After this, the patient may be allowed to walk upon the foot. The great advantage gained by the use of this method of treatment is, that the foot is brought into its new position *at once*, and the use of the adhesive plaster obviates all the inconveniences usually experienced from pressure and abrasion when laced shoes or straps and buckles are used. The adhesive plaster becomes attached to the skin, and unites the sole, itself, and the foot, as it were into one body, and thus takes away all partial pressure and friction, and diffuses these, through the elasticity of the skin, over the entire foot and ankle. Laced gaiters made upon the steel sole may be substituted in two or three weeks.

4. *Torticollis.*—After sub-cutaneous section of the sterno-cleido muscle, in the usual manner, I use the following apparatus:

*a.* A strap of adhesive plaster one and a half or two inches wide, and long enough to reach from the temporal region of the

sound side, passing close to larynx, to the temporal region of the affected side.

*b.* A portion of common suspender, tacked to the adhesive plaster, and long enough to reach from the last point named, over the vertex to the ear of the sound side.

*c.* The double tug of a suspender with its buckle.

*d.* A crescent-formed axilla pad, stuffed with any soft substance, having a button at each extremity.

*Application.*—The adhesive plaster is applied from one temporal region immediately anterior to the ear, to the other, the suspender attached is passed over the vertex, the free extremity of this is passed through the buckle of the tug, and each end of the latter is buttoned to the corresponding extremity of the axilla pad placed in the axilla of the sound side. A compress is placed over the divided ends of the muscle and confined by adhesive strips.

The pathological position of the head may now be altered at will, by drawing the free end of the suspender further through the buckle. The ear of the affected side can be made to recede from the shoulder which it had approached, and the chin to rotate from the sound shoulder, so as to correspond with and become fixed in the mesial line of the body.

*Philada.* Nov. 24th, 1852.

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*Review of M. Bernard's Theory of an Hepatico-Renal Circulation.* By D. B. PHILLIPS, M. D., Assistant Surgeon, U. S. N., and Member of the Academy of Natural Sciences of Philadelphia.

In reviewing the recent theories upon physiology, I have met with nothing so well calculated to arrest the attention, as the assertion of M. Bernard regarding the functions of the inferior vena cava, renal, portal, and azygos veins, during the process of digestion.

His views may be briefly stated as follows: Whilst the digestive process is going on, the portal veins imbibe the fluid contents (or a sufficient portion of them) from the stomach, and thus become engorged; the liver not being able to receive the whole of

this, and still carry on its healthy office, a portion of this blood is sent into the inferior cava by a direct communication between it and the portal vein; this blood, charged with the materials absorbed from the stomach, passes up the vena cava until within a short distance of the diaphragm, here the coats of the inferior cava contract upon its contents, forcing the blood down again as far as the renal veins, but owing to the existence of valves just below the mouths of these veins, it cannot pass lower down, but is forced to enter those veins and thus pass on to the kidneys, where any poisonous properties are eliminated, without having entered into the general circulation. The blood from the lower extremities, he thinks, is returned to the heart by means of the two azygos veins, which, he affirms, have their origin below the valves before alluded to. It is with very great diffidence that I attempt an investigation, or presume to question such high authority as M. Bernard's, yet it seems to me that there are some insuperable objections to his theory when applied to the human subject. In the first place, after having witnessed careful dissections made for this purpose, I have never been able to discover any trace of the commnnication between the inferior cava and the portal vein, other than through the hepatic veins. Secondly, anatomists tell us that there are no valves in the inferior cava: this is positively affirmed by Mr. Wilson. Thirdly, the same author tells us, that the azygos veins frequently anastomose with the renal veins; in which case it would be evident that the existence of valves in the inferior cava would be no hindrance to the passage of the blood of the portal veins into the general circulation. These reasons alone seem to me sufficient to refute M. Barnard's theory: but apart from these, there still exist others of even more stubborn nature. Suppose we admit the existence of communication, valves, and proper arrangement of the azygos veins, as stated by M. Bernard. Then during the whole digestive process, there must of necessity be an antagonism between the renal arteries and veins; the first driving arterial blood into the kidneys, with all the force of a powerful muscle, such as is the heart, and the other acting only by the comparatively feeble contractility of the coats of the cava, it would be self-evident that the latter would be prevented from entering the kidneys from the little resistance it could afford. But even were the antagonism

perfect, and did both vessels discharge their contents into the kidneys with equal force, then for the space of fifteen hours out of the twenty-four, the kidneys would become the recipients of an amount of blood, even quintuple the quantity of urine evacuated.

If M. Bernard's theory is correct, there could of course be no blood returned from the kidneys during the whole process of digestion—now, adopting five hours as the length of time occupied in this process, and allowing three meals per day, we should have no circulation in the kidneys, (or rather no return of blood from them) for fifteen hours out of the twenty-four. What then becomes of the enormous amount of blood which has been driven into these organs by both arteries and veins during the whole of this period? M. B. has given us no solution to this mystery. Thus, then, to sum up: The communication between the vena cava and portal system cannot be demonstrated; except, perhaps, as an abnormal occurrence in the human subject. The existence of valves in the inferior cava are denied by the best anatomical authority. The existence of anastomoses between the azygos and renal veins, proven to be of frequent occurrence; and, above all, there still exists the objection, that the kidneys receive an amount of blood vastly exceeding the quantity of urine eliminated. I think that with these difficulties unexplained, that we must even hesitate to adopt a theory which, although beautiful in its design and imagination, seems thus far at least to be wanting in facts and reasons to support it.

# CLINICAL REPORTS.

*Pennsylvania College, Ninth below Locust street. Service of* Professor GILBERT.

Reported by W. H. GOBRECHT, M. D.

*October* 23*d.*—CASE XXIII. *Resection of Superior Maxillary.*—In presenting a patient with Tumor of the Superior Maxillary bone, Prof. Gilbert made the following prefatory remarks upon the subject of tumors generally:

Tumors are divided into two great classes, viz.:—

1. *Malignant* or *Heterologous.* 2. *Benign* or *Analogous.*

The *Malignant*, in bones, are of two orders. 1. *Osteo-cephaloma*, which is a brain-like degeneration of the bone, whilst the surrounding tissues are healthy. 2. *Osteo-carcinoma*, where the affection is of a cancerous character.

The *Benign* has five species, viz.: 1. *Exostosis*, which is an outgrowth or extension of surface, and may be either *hard*—which occurs upon flat bones not often calling for removal—or *cancellated*, which, existing principally on the extremities of long bones, interferes with the action of the muscles and frequently demands removal. After these operations, inflammation and suppuration generally follow; we therefore dress with a dossil of lint, and heal from the bottom of the wound. 2. *Osteoma*, an enlargement of the entire circumference of the bone. This may degenerate, and then we remove, if possible, by amputation. 3. *Enchondroma.* This is a fibro-cartilaginous tumor connected with the osseous structures. Enchondromata are of two varieties. 1st. That developed within the substance or cavity of the bone, distending it. The 2d is dense and peripheral, growing from the periosteum and covered by a thin bony pellicle. 4. *Osteo-cystoma*, (of which spina ventosa is a form,) occurring in the lower jaw and in the long bones. In this form of disease we lay open the cyst and destroy it by cauterization. 5. *Osteo-sarcoma.* This is more difficult to distinguish from the malignant orders of tumors. It is a mixture of bony, cartilaginous and fleshy structures. A large and beautiful specimen of this description of disease, involving the upper part of the thigh and

requiring amputation just below the hip joint, is preserved in the museum of this Institution.

The case before us is diagnosed to be an *Enchondroma.* The patient, Eliza McB——, of New Jersey, married, aged 32, states that about 11 years ago, a firm and hard swelling was noticed on the right side of the face, which slowly increased; latterly its growth has been more rapid, so that it now presents the enlarged appearance exhibited in the occompanying cut by Gihon, from a daguerreotype of Laughlin's.

The tumor, which is as hard as bone, involves the right superior maxillary, and extends from the base of the alveoli below to the orbital process above; is terminated externally by the malar process, and internally covers its nasal portion. The palatine plate is undisturbed, and the alveoli not involved; the nostril is not much obstructed, the tears passing freely into it, whilst the breathing is good. The eye is but slightly irritated. Very little pain exists. There is no dyscrasia, no lemon tint of the skin. The patient is neither wan nor spare. The age is favorable, and all these, together with the firmness, slowness of growth and small size, indicate most positively that its nature is *benign.* Hence we may safely state that there will be no return of the disease.

In all probability it is an *Enchondroma* springing from the anterior surface of the superior maxillary, but in going into the

operation, we shall be prepared to remove the entire bone, should we discover it to be involved. Prof. Gilbert states that he has removed the superior maxillary entirely in one case, and the maxillary and malar bones in another, within the last eighteen months.

The patient being seated, an incision was made from near the inner canthus of the eye to the angle of the mouth, and the flaps thus formed dissected up from their attachments, the ala of the nose being separated from the side of the anterior naris. These flaps being then held aside by copper spatulæ and the fingers of assistants, the exposed tumor was circumscribed by a strong scalpel, and (that which proved to be) its anterior portion partially, broken away. At this stage of the dissection it was discovered that nearly the entire bone was involved, the removal of which (with the exception of a part of its posterior wall,) together with the palatine process of the palate bone, was effected by first dividing the tissues investing the roof of the mouth a little to the right of the mesial suture, as far back as the palate bone, at which point a transverse incision was made for the purpose of saving the attached soft palate. The globe of the eye, with its inferior muscles, was then separated from the orbital plate by careful elevation and dissection.

Strong cutting forceps were then applied by the mouth and right naris, but being forced to the left by the tumor, dislocated the septum narium and divided the palatine arch and alveoli on that side of the nasal crest. The malar process was now divided on a line extending into the anterior extremity of the spheno-maxillary fissure with Heys' saw and the bone nippers. The nasal process was next divided by pointed forceps high up, and the ethmoido-maxillary suture opened with a strong scalpel. The osseous connexions were now entirely divided, by drawing the superior maxillary forwards, and all adhering soft tissues detached, carefully preserving the continuity of the lateral half arch of the palate.

The hæmorrhage was not alarming, no ligatures being employed during the operation.

The actual cautery was now applied to every part of the cut surfaces, from which oozing was perceived, except the integumental edges, which, after stuffing the cavity left above the mouth with wads of lint, were brought together, and thus retained

by four fine and two hare lip gold needles, and the twisted suture, with intervening adhesive strips.

The patient bore the operation with great firmness, having been put under the influence of anæsthetic agents in the commencement of the operation only. The amount of blood lost did not exceed twelve ounces. The action of the heart was depressed, but complete syncope did not occur. Her pulse soon rallied after the operation, when she was carried to bed. There was a little reactionary hæmorrhage, which was controlled by pressure upon the facial artery where it mounts over the lower jaw, and the application of cold water. Anodynes were administered to allay pain and procure sleep.

No untoward symptoms were manifested during the after treatment. The pulse never exceeded 90 beats in a minute, and no excited action beyond that necessary to repair was at any time observed.

25th.—The four small needles were removed to-day and some of the lint wads.

27th.—All the remaining needles and wads were now removed, and union by the first intention found to exist throughout the entire extent of the wound. Adhesive strips were re-applied, and other wads of lint, saturated with Creasote water, introduced to obviate the fœtor of the discharge.

On the 30th, precisely seven days after the operation, the patient was taken to her home in South Camden in a carriage, and the case has progressed favorably since—there being but very little deformity of the face perceptible.

*Appearance of the removed Bone and Tumor.*—The outlines of the bony mass were perfectly normal. All the cut surfaces were unchanged in structure. The fibrous degeneration or enchondroma composing the tumor extended into the antrum and filled it, with the exception of the posterior and outer fossa above the dens sapientiæ. The anterior surface, the inferior spongy bone and the nasal wall are involved and lost in the adventitious formation. The ultimate structure of the tumor having been submitted to microscopic examination by Prof. F. G. Smith, it was found to consist of fibrous filaments and cells, free from any admixture of malignant corpuscles.

*October* 27.—In the case (No. VIII.) of Mary W——, previously

operated upon, (Oct. 9th,) for disease of lachrymal sac, the style was removed, then cleansed and returned, after the duct had been injected with the following:

℞. Creasoti gtt. vi.
Aquæ f.℥j.

Case XXIV.—*Acute tonsillitis.*—Mary R——, aged 21, was affected a week since, with general fever, and pain and swelling in throat from enlarged tonsils. She was purged with a solution of Sulphate of Soda and Tartarized Antimony, and the inflammation was thus reduced to the subacute stage, in which it has been kept until this time. The same general treatment was ordered, and the application of solid Nitrate of Silver, was made to the enlarged glands.

Case XXV.—*Strabismus Convergens* of left eye, the result of accident.—John W——, aged 24, fell with his face in a gutter, at three years of age, since which time the sight in it has been very poor. This case, then, is not congenital; and Dr. Gilbert questions whether strabismus is ever really congenital, believing that it comes on soon after birth as the result of some one of the accidents or diseases common to children. In the case in point there was, in all probability, concussion of the brain from the fall, and perhaps a slight effusion of blood, convergent strabismus supervening.

The *proximate* cause of this affection, it was further remarked, is shortening of one of the four recti muscles of the globe of the eye, but the oblique are not affected, and should never be divided. The shortening of the internal muscle is the most common. Next in order of frequency we have the external muscle shortened, producing *leer* eye. In these, as in the other cases, the opposing muscle is lengthened, the affected eye loosing its power of vision from the want of use which is induced by its unnatural position.

The cure is effected by dividing the shortened tendon, and many instruments have been employed for this purpose. Dr. Gilbert closes the sound eye by a monocle, thus giving great command over the affected organ, and relies totally on the fingers of assistants for the separation of the lids, then picking up the conjunctiva with the forceps he snips it with the curved scissors,

introduces the silver hook, draws forward the tendon and divides with the angular scissors. This latter step he repeats until every offending portion of the tendon is cut and the eye occupies its proper position, since the hook, instead of passing completely beneath the tendon, may go between its parallel planes of fibres and a partial division only occurring, partial relief only follows.

Dr. Gilbert has operated a great number of times since 1842, and by these precautions has found that in 19 out of 20 cases a cure is effected.

The previous application of ice water to the eye is not resorted to by this surgeon, and in the after treatment confinement of the patient during favorable weather is deemed unnecessary. The eye is directed to be used occasionally, and cold water applied if *itching* is set up. The natural ecchymosis which follows this operation is not to be confounded with inflammation, inasmuch as no pain, heat or swelling is found accompanying it. The operation as above directed was then performed with success, the affected eye resuming its proper position.

30th.—Third day after operation; ecchymosis of the conjunctiva exists, but no inflammation; the wound has healed; the eye is perfectly straight, and moves with its fellow. The cure is established.

*October* 30th.—CASE XXVI. *Encysted Tumors of Face.*—Edmund W——, aged 33. Two or three years since, small tumors began to appear upon various parts of his face, and gradually enlarged, so that now, just outside of the right external canthus of the eye, there are five of these of sufficient size to warrant removal. Such tumors will be found filled with atheromatous matter, and arise from the closure of the ducts of the sebaceous follicles of the skin, these then enlarge by the pressure of the confined secretion which soon becomes morbid in its character, the surrounding cellular tissue is made firm and resisting, forming a sac, several of which individual sacs may be agglutinated, as in this instance where three are in close contact. Dr. Gilbert has removed five or six from the face, arm and scalp of a lady who had an immense number of smaller ones over her body. These tumors are associated with a morbid condition of the skin

generally, and in such cases we find *acne punctata* as a concomitant and probably a precursor.

To remove these tumors a simple incision was made on the sacs which were dissected out with their contents. The wounds were dressed in the usual manner.

CASE XXVII.—*Tenotomy* performed for *obstinate flexion of right carpus*, as a result of scarlatina, producing shortening of some of its tendons. The flexor carpi radialis,—ulnaris, and the palmaris longus seem to be at fault, producing the same deformity which we perceive in burns of the anterior part of the fore-arm and hand. In these two cases, however, the treatment is different; in the deformity from *burn* we transplant a piece of integument which takes the place of the contracted cicatrix which we cut out; but in *this case* we merely divide the *tendons* which are here at fault, and then extend the hand on a splint. The third and fourth fingers are also firmly flexed on the palm in consequence of an abscess which occurred in that place at the same time. The difficulty here resides in the palm, and will be remedied at a future period.

The narrow tenotomy knife was now introduced through the skin on the inside of the flexor carpi ulnaris and passed between this tendon and the skin; the edge of the knife was then turned upon the tendon and it was divided. The same was done on the radial side, for the division of the tendons of the palmaris longus and flexor carpi radialis. The hand was extended and cold water dressings applied.

Nov. 3d.—First dressing. The radial incision has healed by first intention, but the ulnar is granulating up; the hand is well extended and cold water dressing continued.

6th.—Ulnar incision still granulating; extension and cold appliances kept up.

10th.—Improving; full extension is borne without pain.

*November 3d.*—A case of *Congenital Teleangiectasy* in John G——, aged 20, was exhibited, and the history related, with remarks upon the disease, and the method of operation detailed. This patient will be brought before the class again for operation on the 20th inst.

Case XXVIII.—An injury by a circular saw (which was 33 inches in diameter, and whose teeth were 1 inch in length) was now presented. This accident occurred two weeks back, and as its result there was found a lacerated and contused wound of a part of the right hand. This, which involved several of the fingers, demanded an amputation of the two last phalanges of the little finger, which was dressed with one twisted suture and adhesive strips. There was also an entire separation of the palmar aspect of the ulnar side of the hand for a space of about two inches in length and one and a half in width, the presenting surface being lacerated and contused. This Prof. Gilbert made an attempt to heal by *scabbing*. To show the result of this method the patient is now brought before the class. An *artificial scab* was formed by means of Liston's isinglass plaster applied to the wound, leaving a small opening for the exit of any purulent matters at its proximal extremity; this plaster was then coated with Collodium and lint. The case is to-day dressed for the first time, and the wound is found to be almost entirely healed; the artificial scab was re-applied. The other wounds are perfectly closed.

10th.—Artificial scab removed and the entire surface beneath found cicatrized.

Case XXIX.—*A bite of mid-finger* of right hand. An Irishman, aged 21, received this injury during Election week. The case appears to have been treated for the preservation of the last phalanx, which seems only to have been originally involved, but inflammation having been set up the bone has become necrosed, the joint is invaded by the extension of the inflammation, and the patient presents himself with an enlarged, sloughing and offensive sore occupying the position of the bite.

It will be necessary here to remove the extremity of the finger in the continuity of the second phalanx away from any existing inflammation, or necrosis may again follow. Amputation was then resorted to. Two collateral digital arteries were ligated, and the flaps brought together by two sutures and adhesive strips. Cold water dressing applied.

6th.—Dressed for the first time,—doing well.

10th.—All the ligatures and sutures removed, and cerate dressing substituted for the cold water. No inflammation.

17th.—Considerable inflammation found to exist;—stump swollen, red and painful; abscess threatened; this trouble arising from the irregularity of the patient's habits. Creasote was applied as a counter-irritant over the inflamed integumental surface and cold water ordered.

20th.—Inflammation and swelling has subsided; the skin is thrown into wrinkles; re-applied the creasote.

*November* 6th.—J. S., the case (No. VII.) some time previously (Oct. 6th) operated upon for Cataract by the method for absorption, was shown, and observed to be progressing favorably. The dark ring formed by the shadow of the pupillary margin of the iris upon the lens is increasing, showing that absorption is going on with its work and its surface is receding. Prof. Gilbert here stated that after complete removal of the lens, glasses are not to be worn for some length of time, say for two or three months, and then but sparingly for a further period, since the concentration of light upon an eye previously in total darkness will act as an abnormal stimulus to the nerve, and produce all the injurious effects of such stimuli.

Case XXX.— *A Tumor of upper eyelid* of the right side, of the size of a pigeon's egg, in a negro,—Evan ——, aged 28,—was removed by making an incision over the sac, parallel to the edge of the tarsal cartilage, and then dissecting it out. The wound was closed with one gold needle, and two strips of isinglass plaster carried from the forehead to the cheek. The cold water dressing was applied.

10th.—The needle was removed on the 7th, and union by the first intention is perfect. The lid has regained almost entirely its natural size and appearance.

*November* 10th.—Case XXXI. *Chronic inflammation of external meatus of Ear.*—R. B., mulatto, aged 21. Three years since first perceived a discharge from both ears after bathing, and this has been kept up with occasional evacuations of lumps of hardened cerumen until very recently, but there has been no

co-existent deafness. Upon examination with the speculum, the parietes of the external auditory meatus were found to be in a state of chronic inflammation; but the membrana tympani was healthy, which accounts for the absence of deafness. The treatment ordered was counter-irritation behind the ear by creasote, and the use of the following prescription:

℞ Cupri sulphat. gr. ij.
Aquæ fontis f.ʒ j.

M. S. Inject the ear once daily after cleansing it well with warm water.

Case XXXII.—*Chronic inflammation of lachrymal sac, first stage.*—Daniel D——, aged 16. In this case there is found stillicidium lachrymarum, tumor at the internal canthus; and regurgitation of tears mingled with mucus into the eye on pressure upon the lachrymal sac. Creasote was painted over the sac and ordered to be repainted every third day, as a counter-irritant; and as a collyrium this prescription was directed:

℞ Zinci sulphat. gr. j.
Aq. rosæ f ʒj.

M. S. To be dropped in the eye once daily.

13th.—Improving; the tears pass more freely into the nose. Creasote re-applied and collyrium continued.

Case XXXIII.—*Ozæna* in a female, aged about 30, resulting upon secondary syphilis, which was communicated to the patient by nursing a child thus affected, her nipple being first the seat of the disease, and her constitution suffering in consequence. She was ordered

℞. Syr. sarsap. comp. Oj.
Auri chloridi gr. j.

M. S. A tablespoonful thrice daily.

*November* 13th.—Case XXXIV. *Loss of right eye from wound.* John K——, aged 22, a machinist, whilst engaged in his occupation, was struck in the eye by a chip of iron, which wounded the globe, but was then supposed to have rebounded, inasmuch as the wound healed readily with the ordinary result of such injuries; in three weeks, however, a black speck presented at the

wounded point, which speck was found to be a foreign body, and this being discharged proved an iron turning measuring a half by five-eighths of an inch in its superficial diameter aud several lines in thickness, weighing 72 *grains*. Probably the largest foreign body ever lodged in the eye, without producing anything beyond ordinary symptoms; the cushion-like resistance of the internal structures of the globe no doubt having prevented its passage into the cranium.

An artificial eye can be readily fitted upon the resulting stump, which is good.

Case XXXV.—*Bite of Thumb.*—Mary M——, aged 14. This, the second case of wound of this character brought before the class within ten days, has resulted in the milder form of paronychia only, namely: abscess at the root of the nail, which is separating by the use of poultices.

Case XXXVI. *Operation for occlusion of lachrymal duct on left side.*—Mrs. C., aged about 50, has had chronic inflammation of lachrymal sac and duct for nine years, with all the usual concomitant symptoms, and now presents herself for relief, the duct being totally occluded. The ordinary operation was performed, and a bougie made before the class by rubbing white wax upon a strip of fine linen, and then rolling it up conically, was introduced.

17th.—The bougie was removed and the silver style introduced.

*Nov.* 17th.—This morning Prof. Gilbert presented a tumor of the right breast which he had removed on Monday the 15th, from a female patient, aged 38. It was first noticed about four years ago, and was then supposed to have arisen from a contusion, since which time it had gradually increased. Its external appearance was irregularly lobulated, and its feel very much like that of a number of small oranges in a bag. There was no discoloration of the integument, which was perfectly moveable, and the nipple was not retracted. The disease appeared under 40 years of age, before which period tumors of this kind are almost never malignant. It was of slow growth and painless. All these

facts led to the belief that it was a Cystic sarcoma, which is benign, and thus its removal was undertaken. Amputation was performed, and the entire mass, whichwas found to weigh 7 lbs. 6 oz., turned out of its bed upon the pectoralis major muscle.

Very little of the mammary gland is observed as remaining; the cellular and fibrous envelopes of its lobules being greatly developed, and forming with several large sinuous serous cysts the mass of the tumor. Some of the fluid discharged from the cysts was microscopically examined by Prof. F. G. Smith of this Institution, and the diagnosis of the benignity of the tumor confirmed. The result of his investigations are as follows:

1st. Pale, very transparent cells. 1-50th to 1-100th of a line in diameter, the majority containing pale nuclei.

2d. Tabular plates of cholesterine.

3d. Small round corpuscles about 1-250th of a line in diameter, resembling pus corpuscles, and cells of epithelium newly formed.

4th. Globules resembling milk.

The fluid is alkaline in its re-action, glutinous in consistence, and contains a large quantity of albumen, as evidenced by coagulation with heat.

There are no cells of malignant character discoverable.

20th.—The patient is reported as doing remarkably well.

Case XXXVII.—*The results of strumous inflammation of Knee joint*, in Thomas R——, aged 17, were stated to have been false anchylosis of the joint, with the leg flexed almost at a right angle upon the thigh from contraction of the tendons of the inner and outer hamstring muscles, together with firm adhesions of the integument to the bones and fasciæ about the joint. Subcutaneous section of the inner and outer hamstrings was made by the late Prof. Grant in conjunction with Prof. Gilbert about 18 months since, and the limb extended forcibly. The patient has had good use of his limb for now nearly six months, and is brought forward to prove the value of Tenotomy as a remedial agent in the treatment of deformities.

## BIBLIOGRAPHICAL NOTICES.

*The Prescriber's Complete Handbook, comprising the principles of the art of Prescribing, &c.* By MM. TROUSSEAU AND REVEIL. Edited, with notes, by J. BIRKBECK NEVINS, M. D. London: Hippolyte Bailliere, 219 Regent street; and 290 Broadway, New York.

Under this somewhat pretending title we have a very fair translation of the admirable little *Traité de l'Art de Formuler* of Trousseau and Reveil. To the French physician and student the original must be invaluable, and this translation will be received with pleasure by many here and in Great Britain. The work was written with special reference to the Therapeutics of Trousseau and Pidoux, a fact that must be borne in mind in making any critical estimate of it. We have found it particularly interesting and useful as a companion to that excellent manual. As an independent treatise on the art of prescribing, it is too entirely French. It refers almost exclusively to the Paris Codex, and to French methods of prescribing and compounding, which differ essentially from our own. The American prescriber will find himself at a loss among the profusion of *collutoires*, *lavements*, *pommades*, *looches* and *papiers*, that are almost unknown to our pharmacy. While, therefore, the general principles and artistic rules of the book are of exceeding value, the special pharmaceutic details will be comparatively useless, on account of this difference. The thoughtful prescriber will, however, find here many hints not to be neglected, and perhaps the very strangeness of the formulæ may serve to lift him out of the ruts of daily unreflecting routine into which we are all too apt to fall in our prescribing.

The first part of the work gives us a natural-historical classification of the Materia-Medica, with a nosological table and an indication of the therapeutical classes attached. In translating this, Dr. Nevins retains the French names as principal, adding the English as subordinate. This we regard as an imperfection in his work. He should have substituted either the

English or Latin names as principal, and allowed the French to remain, if he chose, as subordinate. The merely English student, who runs his eye down the column of staring Roman capitals, will hardly recognize CHANVRE INDIEN as *Indian Hemp*, even if followed by that name in small italics. The second part contains the practical rules for the direction of the prescriber, and is the most valuable portion of the book. It is concise, clear and philosophical, and reveals in every line the masterly hand of Trousseau, by far the ablest living teacher of therapeutics. The sections on the Mutation, Elimination and Accumulation of Medicines are admirable. The same may be said of that on the circumstances which modify the dose, in which an immense amount of valuable information is compressed into a very small space. The chapter on the Combination of Medicines is borrowed almost entirely from Paris's Pharmacologia; and it must be admitted that the authors could not have gone to a better source, although they certainly might have made some acknowledgment of their indebtedness. Following this is a table of chemical incompatibilities, which will be found of much use. The "Short Sketch of Pharmacy," with its notice of the officinal preparations, is very French, and liable to the objection before urged. It is to be regretted that Dr. Nevins did not, by extensive notes, render it applicable to the formulæ of the British Pharmacopœias. The Magistral Formulary must incur the same criticism. The Toxicology is very concise, methodically arranged, and sufficient for all practical purposes.

The formulæ in this book are invariably given in English, as, in the original, they are in French. The current of professional opinion in France sets at present against Latin prescribing. Our authors merely say that "the prescription ought to be written either in the common language or in Latin," but they set the example of adopting the former. Hanin (*Cours de Mat. Med.*) is more explicit. He says, "Les formules doivent être écrites en langue vulgaire. Il-y-a une présomption ridicule de vouloir formuler en Latin: cet usage pouvait être bon quand la langue medicale ou pharmaceutique n'etait pas encore formée." We believe that Latin prescribing is almost unknown in France at this day. Whether or not we should follow their example, we are not, at present, prepared to determine, but we can assure our

friends that there is much more to be said in favor of the change than very many suppose. Another thing we are glad to perceive is, that Messrs. Trousseau and Reveil do not inform us, as is usual, that our ℞ is an altered form of the astrological symbol of Jupiter. Dr. Nevins labors to defend the profession against the charge of using "dog-latin," by insisting that our $\overline{aa}$ stands for the Latin *alterius alteriusque*, and not for the Greek *ana*. We have always felt much more strongly the reproach of the cloven-footed bit of paganism which Paris taught us to believe in, and which, after all, is not true. It may be that foolish people did put the sign of Jupiter at the head of their prescriptions, but it is equally true that the imperative *Recipe* is necessary to any rendering of the sentence as written, (and could not, therefore, be substituted by a mere symbol,) and also that the sign ℞ is used in other connections to signify an abbreviation of any word commencing with R. In the oldest printed Missals the identical ℞ is employed to mark the responses. We have seen an old German book of Exorcisms (published by ecclesiastical authority,) in which the same type is used to designate the responses to the prayers and to head the formulæ of drugs for fumigation, &c. We certainly cannot suspect the authors of using astrological symbols as a caption to devotional exercises. If, then, the R with a crossed tail is susceptible of this innocent use, physicians might certainly be allowed to employ it without incurring the charge of retaining an absurd remnant of exploded superstition. We shall therefore continue to write it, with the firm conviction that it means properly simply *Recipe*, and nothing more.

Dr. Nevins has performed his part of the work skilfully and faithfully, for the most part. We regret that he did not exercise a more careful supervision over the original and correct its errors. There is a mistake as to the dose of the arsenical preparations, which it is surprising that the authors could make or that the translator could copy without detecting it. The *Solution febrifuge arsenicale du Dr. Boudin* is directed in the proportion of one part of arsenious acid to 1000 of water, and we are told that an ounce of it contains nearly half a grain of arsenious acid. The dose is stated as two teaspoonfuls for children, ten or fifteen for adults. On the same page Fowler's Solution is directed in

the proportion of one part each of arsenious acid and carbonate of potassa to 100 of water, and we are told that one drachm contains three-fifths of a grain of arsenious acid, and one and one-fifth of a grain of arsenite of potassa. Yet in the next line we are informed that this solution "is used in the same doses and in the same way as the last." It is incomprehensible that Dr. Nevins should pass over so gross an error without noticing it. "Two tea-spoonfuls" of Fowler's Solution contain one and one-fifth gr. arsenious acid and two and two-fifths grs. arsenite of potassa, and yet this is the dose which an unsuspecting and literal prescriber by the book would give as the dose for a child! We beg that all who intend using this handbook as a guide in prescribing, will look up this erratum, and "when found, make a note of it."

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*A Practical Treatise on Dental Medicine, being a Compendium of Medical Science, as connected with the study of Dental Surgery*, &c. &c. *Second Edition.* Revised, corrected and enlarged, by THOS. E. BOND, A. M., M. D., Professor of Special Pathology, &c. &c. in Baltimore Dental College. Philadelphia: Lindsay & Blakiston, 1852.

Having noticed with sincere and earnest commendation, in the Medical Examiner for March, 1851, the first edition of this valuable book, we should perhaps be forgiven if disposed rather to congratulate ourselves than the gifted author, upon the appearance of the second and enlarged edition just handed us for examination. To him the demand for this extension of his work is but the fair and just result of the merit that belongs to his original labor, the successful performance of a task that brings its due reward; while to his friends it is practically a public endorsement of opinion that confirms their high estimate of the work.

The present edition, besides some minor or mechanical improvements, possesses a most sensible chapter on anæsthetics, wherein the able pen of Professor Bond has, it may be hoped, put to rest all doubts that may have existed in some minds, as

to the safety or propriety, in the hands of the dentist, of these powerful agents.

The Professor says: "Painful experience has shown that the use of anæsthetics has been more dangerous in the hands of dentists than of other administrators, death having more frequently occurred in attempts to save the patient from the pain caused by the little operation of extracting a tooth, than perhaps from all the instances in which anæsthetics have been administered to prevent the consciousness of suffering in capital operations."

Since the introduction of sulphuric ether and chloroform into medical practice, and their supposed applicability to the practice of dental surgery, it has been our fortune to occupy the position of a witness, and not that of a party to their administration. Questioning their safety, and unwilling to take the responsibility of suspending the consciousness of those who needed operations, the pain of which we knew, from daily experience, could be readily endured without such intervention, it has been our invariable rule to oppose the recourse to that means of escaping one evil by risking the encounter of another, and perchance a worse. But where advice and reasoning would not satisfy the patient, we have insisted that the family physician should be in attendance and administer the stupefying vapor. In the course of perhaps fifty or sixty opportunities thus afforded for judging of the value and effects of anæsthetics in the dentist's practice, we have been confirmed in our opposition to its use. Our testimony would go to prove that, in a few cases, the patients have professed to feel no pain, or to remember none; but even in these best or successful instances, there were at times contradictory statements making the testimony of obtunded faculties, or faculties just recovering from that state, of doubtful value as to the question of the real amount and character of the pain endured from the operation. In other cases, it was as difficult a task for the physician to induce the patient to take the ether or chloroform, as it had been to obtain submission to the pain of extracting the tooth; and in several, the effects upon the stomach and nervous systems were such as to preclude the possibility of operating altogether.

With the necessity of giving in such testimony, as the result of our own experience, it will not be wondered that we hail with pleasure the direct and unanswerable condemnation from Pro-

fessor Bond of the use of anæsthetics by the dentist, to avoid the pain of his operations; and we ask leave to quote one more passage from the same high authority:

"The greater danger of anæsthesia in dental operations is easily accounted for. The operation has to be performed upon an organ concealed in the cavity of the mouth. The preliminary stages of the operation, adjusting instruments, &c. cannot be accomplished until the patient has been made unconscious. The mouth then is generally found spasmodically closed, and cannot be forced open without considerable effort. In the mean time, the patient cannot continue the inhalation, the soporific effects of the anæsthetic pass off, and by the time the operator has accomplished the separation of the gum, consciousness has returned.

"In an operation upon any other part of the body than the organs through which inhalation is accomplished, the surgeon having the patient in a proper position for the immediate operation, can commence it as soon as anæsthesia is effected, and can proceed without interrupting the inhalation, which can be continued according to circumstances, the patient not being profoundly, but continually narcotized.

"But the dental operator must carry anæsthesia so far as to produce relaxation of the muscles of the jaw; or what I think is more commonly the case, to so completely overwhelm the consciousness as to obviate that instinctive resistance which seems to linger after volition appears to be suspended. When the patient begins to inhale the chloroform, his mind is intensely occupied with the anticipated attack upon his teeth, and his fears are concentrated upon the dread of the attack being prematurely made. By his eyes and hands he continually gives signals of consciousness as long at he can, and the last effort of volition is to clench the jaws as firmly as possible. Muscular life being less easily overcome than intellectual, the extreme anæsthetic effect of chloroform or ether has to be induced in order to overcome the difficulty.

"Again, the dentist cannot continue the administration of the anæsthetic while operating, at least not with any regularity; he is obliged to carry the anæsthesia so far as to permit a certain degree of it to pass off without the restoration of consciousness. In other words, he must produce *super-anæsthesia*, because he must provide against the known evanescence of the condition."

Nor is it less reasonable to conclude that, in a difficult or protracted operation, the manipulations of the dentist would be most unfortunately affected by the constant fears in his own conscious mind, that the submission and tranquillity of his patient will cease the very next moment.

Professor Bond's excellent book should be carefully read by every dentist who has his own success and the welfare of his patients at heart.

E. B. G.

# THE MEDICAL EXAMINER.

## PHILADELPHIA, DECEMBER, 1852.

### MEDICAL DEPARTMENT, U. S. NAVY.

A Board for the examination of Assistant Surgeons for promotion, and of candidates for admission, will convene at the Naval Asylum, Philadelphia, on 15th Dec. The Board will be composed as follows:

*Surgeon*, WM. P. C. BARTON, *President.*

*Surgeons*, CORNICK, DILLARD, HORNER and RUSCHENBERGER, Members.

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DR. JONATHAN COWDERY, the oldest Surgeon in the U. S. Navy, died recently at Norfolk, aged 86 years. He had been in the service nearly fifty-three years, and took part in the Tripolitan and last war with Great Britain. In the former he was taken prisoner by the Turks and retained two years.

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The distinguished and venerable Dr. DANIEL DRAKE, who has so long filled a prominent part in the profession of the West, died at Cincinnati during the last month. We shall present a more detailed notice of his rise and career hereafter.

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### DR. BROWN-SEQUARD.

During the months of September and October, this gentleman gave highly interesting and successful courses of lectures to two classes of the most distinguished physicians in New York, and is now engaged with equal success in Boston, where his lectures are attended by almost all the eminent physicians of that place.